PRACTICAL HOME ECONOMICS

FOR TEACHING NUTRITION, FOOD, HYGIENE, CLOTHING, HOME MAKING AND HEALTH.

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Reviving an Old Art

PRACTICAL HOME ECONOMICS

VOL. X OCTOBER, 1932 NUMBER 10

Developing a Philosophy For Home Economics Education

By
Vera Mintle

Home Economics Department
De Pauw University

IN this period of economic depression, social disintegration and change from what has been more or less stable and traditional in America to the experimental epoch in science, religion, morals and almost in human values, home economics supervisors and teachers need more than ever before to make inquiry into their own field to see if they can better integrate their major interests in the teaching field to help bring about at least a tendency toward "normalcy" in life.

Perhaps a method of approach would be to see what we are doing at the present time in the field of home economics. No attempt is made to give this in full and I do not feel it is an adequate outline of the field but it is perhaps enough to get us in a sufficient "upset" to give direction toward the solving of what, to me, is a really vital situation worthy of our best thinking and ultimately some concerted action.

The following points seem worth examining and, even if you do not agree with their content, they may lead to thinking of others that should have been included and that you need to deal with in your own personal situation.

Vocational and Liberal Arts Colleges are attempting to give practically the same major courses with fewer electives in the Liberal Arts Colleges than in state vocational schools.

Practically the same amount of science is required of a girl who receives a B. A. degree as of one who receives a B. S. The liberal arts students have such requirements as 10-18 hours of foreign language that the bachelor of science degree does not usually require.

Courses in both types are still placing the emphasis on the mechanics of house keeping, budgeting and business related to housekeeping rather than upon right family relationships, the social values of the home, and the "emotional experiences which of their own virtue give rise to intense convictions and overwhelming enthusiasms which make for loyalties that will carry through all manner of turmoil, conflict and opposition, and recurrent despair."[1]

A very highly specialized program is being offered in all state vocational schools and, as previously stated, the liberal arts schools have copied the state schools as nearly as possible with the limited teaching staff, equipment and funds they have for home economics.

The home economics departments of our junior and senior high schools have, as a rule, courses of study which set forth the aims in the form of abilities, ideals, interests and appreciations, and the more progressive schools are building these into problems and projects based upon some unit of activity. The prerequisites of these courses, if any, are principally in the field of the natural sciences and the more elementary courses of home economics.

In some of the more progressive city systems and colleges we find judgment and creative skills being taught through types of problems and projects.

The trite cooking and sewing have developed into specialized phases and now we find courses or units in selection and preparation of foods, nutrition, clothing construction, selection and care, textiles and textile economics, costume design, child care and development, the house and its care, interior decoration, home management and, more recently, family relationships and home economics for boys.

In the vocational schools the girls are required to take a half day's work in the home economics department and usually home projects are required and supervised by the teacher.

Cooperating with the home economics division of each state college of agriculture and under the vocational education department in the state, extension workers in all phases of home economics are attempting to develop high standards and desirable conditions in rural home and community life. Through a well organized system of instruction; through classes held in different counties and towns; through 4-H Club work for girls; and through personal contact and the publication of bulletins, magazine articles and other printed material, the extension worker is promoting an interesting type of adult education.

Research is being carried on through the graduate schools of home economics in practically every large division of the field. In some fields, as textile chemistry, household equipment, applied design, dietetics and cafeteria management, industries and other organizations are cooperating in furthering research and are utilizing the findings in making their own organization more efficient. Many statistics, questionnaires, case studies and other objective data and information are being collected and some made available through publication.

Emphasis is placed on training girls to teach home economics and to go into other professional fields in home economics at the expense of teaching her to be a really fine homemaker and make that a career rather than a secondary job.

If the preceding picture of what we

are doing is scrutinized we may find some points of interest of which we are already conscious and mayhap something new and altogether vital in this crucial period of change.

Are we as teachers and supervisors of home economics able to make the shift, the reorganization and reconstruction that is necessary to meet the needs of this experimental and changing life? Sometimes I doubt it. We seem to be so static, so self satisfied, so afraid to work out a new idea or to experiment with one even if we have it. We seem afraid to use our ideas and see them criticized, or perhaps fail in part. We feel that others who have had more experience in the field or who are doing some special research are the ones to launch new changes. Who are we that we should uproot, upset and revise a situation that has been going on seemingly very smoothly for years?

Many of us are still teaching more or less what we were taught and as we were taught. Not because we think it is the best way, for many are definitely dissatisfied. We may be hampered by those who are above us in rank because they are not sympathetic toward change or because of poor organization. May I cite two such instances; one wide awake home economics teacher told me recently how she had spent her evenings working over the entire teaching scheme in two of her classes and had handed a typed copy of her plan to her supervisor in plenty of time to be reviewed before their regular staff meeting. The staff meeting was held, weeks went by and the year closed with nothing but a "Thank you, Miss R. I am sure you have put a lot of time on that." Only last week a young woman in home economics told me how she had brought her revised teaching plan directly to the staff meeting, how it was tabled and later a committee appointed to bring in recommendations. Although that was more than six months before the close of the regular school year, nothing constructive had been done with it when the year ended.

These are extreme cases and not frequent, you say. I say, "let us hope so." Is it any wonder we have teachers who only teach their classes per schedule, draw their salary and feel their year completed? It seems to me time that teachers and supervisors get a breadth of vision and do a bit of mature thinking. Supervisors are dependent on their teachers. They are nearest the students and are the ones best able to plan the teaching situation. Let us not mimimize the value of such rich sources.

The very fact that we are giving a scientific approach to the field of nutrition, health, equipment in the home, and a psychological approach to such fields as child training and development should, if taught rightly, open up a wide field of inquiry and help girls tie up life situations with their natural and social environment.

The years spent in their school life, whether in secondary school or college, should be filled with experiences where there is "no one end fixed in advance, but a continuing process determined (within hereditary limits, to be sure) by the adaptive process itself."[2]

If we could conceive and think through clearly what it is in life that brings happiness, that gives the desired satisfaction, that gives and leaves a stabilizing equilibrium in stress and new and changing situations, we might go a step in advance. This new vista might make it seem worth the effort to rearrange our previous and present ideas of presenting subject matter, and find a new tack to follow, namely, that of presenting situations that demand that each girl build herself in relation to material supplied by her environment. We as her teachers are a part of that environment and form a very significant environmental factor in her experience. Are we encouraging the girl to be intelligent in the active direction of her life? An individual's attainment in managing a home results from that individual's voluntary strategy in contending with the challenging resistances she meets in the undertaking. Our task is to create an environment for the girl where she can build herself and improve her "working stock of meanings, making them ever more numerous, ever more inclusive of the rich potentialities of life, ever better organized, and finally ever better and better obeyed as these better meanings are efficiently worked up in appropriate plans of action."

Then we shall have an integrated personality as well as a more nearly true integration of society which may lead us in the direction of some planned organization for society as a whole.

So complex and constantly changing is our mode of living, our environment, even our family unit, that the primary learnings, and perhaps even more the simultaneous learnings, should be building an individual who will be able to face each new situation of home, family and community life in the state and nation with a reasonable degree of assurance. Can this be done as we are teaching home economics today?

It may be interesting to note what others are suggesting.

"Man works that he may have a home, a house to live in, gardens and grounds, a wife and children, an abiding place where the heart is. A home of peace, orderliness, beauty and comfort, culture and grace, is the finest, sweetest thing he can get out of life. To build such a home is to do a great work asa citizen. .

"Homes are built not only out of material things but even more largely out of spiritual things—harmony, justice, sense of right and wrong, forebearance, comradeship, love, godliness, hospitality, generosity, beauty, neighborliness and all the finer things of life."[3]

"In home economics we should have a curriculum that centers on the home, the whole home, and nothing but the

(Continued on page 326)

IMPORTANT ANNOUNCEMENT

Home Economics News merges with PRACTICAL HOME ECONOMICS, beginning with the November number. All names appearing on the subscription lists of the Home Economics News will receive PRACTICAL HOME ECONOMICS for the balance of the unexpired subscription period. Subscribers whose names are on the lists of both publications will have their expiration dates properly extended.

No changes are contemplated in the name, policy or editorial staff of PRACTICAL HOME ECONOMICS. It will continue to present to home economics teachers the best available material, depicting the current trend in home economics in articles that are practical, direct and entertaining.

Figuratively Speaking

A food and health play in two acts
For senior high school students

By
Eleanor Enright

Cast of Characters

ANN WORTHINGTON—*A high school senior*
JANE, PEGGY, RUTH, BETTY—*school friends and classmates of Ann*

MR. WORTHINGTON
MRS. WORTHINGTON
NORA—*the Worthington's maid*

Act I

Scene I

Classroom—two girls talking.

ANN: It's no use teasing me to go to college, Jane! You know how keen I am to go—but with father's salary cut the way it has been, it just can't be done! He told me yesterday I'd have to wait at least a year—maybe longer. Guess it'll be up to me to get a job if I want any new clothes, even.

JANE: Ann, I'm not really teasing you but it's just such a shame you can't go, especially when you've made better grades than any of us! I was just wondering if we could do anything that would show your father that our Home Ec course is really worth something and that if he could possibly manage to let you go to school next year and go on with it, you'd be able to earn a lot more than you could without going. And then our crowd'll just lose half its pep if you're not at school with us!

ANN: (*laughingly*) Oh, don't be sil, Jane—no danger of your crowd losing its pep! Poor Dad, it isn't that he doesn't want me to go, he just can't afford it, that's all. Well, here comes the rest of the crowd—seem to have something on their minds.

(*Enter Peggy, Ruth, Betty—attractive girls but looking very glum.*)

PEGGY: Hello, you two! Wait till you go to Foods Class next period! Something's waiting for you all right. Honestly, Miss Craig makes me tired. Anybody'd think we didn't have anything to think about but her course. I'm so sick of hearing about this old adequate diet I'm almost ready to take up mechanical drawing instead. I know very well our family doesn't live on $9.00 a week and we never have much to eat! (*General laughter*)

ANN: Why all the gloom, Peg? What do we have to do with a nine dollar adequate diet—we haven't nine dollars between—

RUTH: We're going to have plenty to do with it before the year's over! I'll probably get a failure in Foods as my part of it! (*Another laugh*) All this mess about "Buying health with your food dollar"—I don't even believe Mother knows how much it costs. Annie just phones for what she wants—and if Mother doesn't know, just how can I find out, I ask you? You all know Annie! I have a big picture of my going out and asking her any questions. It's hard enough getting *her* permission to make fudge in our *own* kitchen.

ANN: (*gayly*) Wonder how much we spend? I think it would be fun to find out. Maybe I can save enough out of what we spend to go to college!

(*More laughter—Bell rings and all leave for class.*)

Scene II

Same night—Sewing room in Ann's home—Ann is talking with her father and mother.

ANN: Now Dad and Mother, I have a wonderful opportunity to show you I've really learned something in my major!

DAD: My dear, you've already shown us that! But what's new?

ANN: (*Stands up—becomes very serious*) Mr. and Mrs. Worthington, I am going to demonstrate that you are spending more money than is necessary on your family's food. (*Laughter from Dad—interest from Mother*) In short I am going to budget your food money! I am going to show you how to buy Health with your food dollar!

PARENT: We didn't realize our daughter was a combination dietitian, economist, cook—

ANN: (*Interrupts*) And what have you!! (*All laugh together*)

DAD: Seriously though, I wish we could buy something with our food dollar that would keep us from having colds. This last one has nearly laid me out! Donald's been out of school a week on account of cold. However, that's beside the point. What's on your mind, Ann? I suppose I might just as well put this detective story away till I hear your story. (*Feigns great boredom*) Do you really have something you have to work out?

ANN: Do we have something? And how! Everybody in the class is furious at Miss Craig for assigning such a huge piece of work. But I think it's going to be fun—that is, if you and Mother will help me! This is the idea: Practical application, in our own families, of the work we've been doing on adequate diets. Points to be brought out—Are your families spending their food money wisely? Is the diet adequate in every essential? Does it maintain a good nutritional standard? Could the last two points be accomplished with a smaller expenditude of money? We have the whole semester to work at it! Now don't be mad at me Dad for suggesting that if we can save in this way, maybe I can go to school—

DAD: (*Looks thoughtful*) Mother,—I think it's a wonderful scheme. Let's let her try it. We could do it for a month anyway and if it wasn't a success Ann'd be fair enough to see it. After all, we do leave a good many things to Nora!

ANN: (*With a good imitation of a salesman trying to make a sale*) Mr. and Mrs. Worthington, all I ask is a chance to prove my claims! If at the end of the month you're not completely satisfied, your money will be refunded and no questions asked.

DAD: I agree that it seems like a worthwhile project. The only thing that makes me hesitate is having my family used as they might use white rats in a laboratory. Someway or other, I've always had a feeling that the best food in the world was none too good for them. Cutting down on what we eat is carrying the depression too far.

ANN: Now Dad, don't be sentimental and quaint! I'm not planning to kill anybody off, and none of us are going to get hook worm or anything because we won't have anything but bread and molasses to eat! Be progressive and let me try it. (*Comes over and perches on the arm of her father's chair and puts her arm around him.*)

DAD: Well, as usual Ann, you've won! Now I warn you, I'll be grouchy if the food isn't good!

ANN: You old peach—I don't believe there's another Dad in town who'd be willing to try it! I've always said that

my good grades weren't my doing at all. I get them because you and Mom believe I can! Well, nightie-night darlings! I must get busy if I am going to make my mark in my chosen career! (*Leaves room.*)

DAD: It breaks my heart to have to disappoint her about her university course when she never has disappointed us in any way. But I just don't see how I can do it! As for this plan of hers—I can't see how a girl 16 can give you any pointers along that line. I've always had the idea that you were about as good a manager as could be had.

MOTHER: Dad, I think maybe she's right! I want her to try it anyway. Right now we are spending about $20.00 a week. She says she can cut it in two and we'll still be well fed. (*Both look doubtful*) Anyway she can't do much harm in a month's time! She's such a level headed youngster and she's so interested in working it out I move we let her go ahead.

Curtain

Act II

Scene I

Kitchen—Maid looking at table covered with vegetables, fruits and milk, shakes her head.

NORA: Sure, and I don't know what's got into the missus! Turning things over to that slip of an Ann! Buy health with your food money sez she—and sez I, you can't buy health no matter how many dollars you got—anybody that knows anything knows that. And me—I was just bragging to Pat the other day about what a good place I had—no interference at all, at all—just left to do as I plaze. Now look at that table; sure and it looks as if it was a cow we were feedin' instead of folks!

(*Ann enters—very business-like—notebook in hand*)

ANN: Oh, hello, Nora—glad you're here so we can check our grocery list. All the staples for the week are here and remember, Nora, you're to stay off the telephone for a month. (*Nora looks surprised and Ann hastens to add—*) Oh, of course you can call up Pat and all that, but you can't order anything. Now let's get down to work and figure out these meals.

NORA: Well then, it'll take an artist to figure out meals from that stuff—with hardly a bit of mate but a little liver for the week. Praise be, though, she's left us milk and potatoes. Oh, I guess we can make out; but Miss Ann, with all that cabbage—shouldn't we have a little ham or corn beef to give it some taste?

ANN: (*Puts her arms around Nora*) Now, Nora, listen to me—we're going to try this for a month and maybe we'll like it so well we'll keep right on doing it. And if we do, I can go to school. If we don't I'll be around here all next year just bothering you to death, so in self defense you'd better work with me. No, we're going to have plenty of milk and fruits and vegetables—they'll keep us well, and very few rich desserts like pie and pudding, and so on. Really, you're going to have lots more time than you've ever had. Now all our vegetables are to be seasoned with butter or white sauce. There are only a few things you'll have to remember: Everybody is to have a quart of milk a day; everybody is to have one egg a day; every day we'll have one cooked and one raw vegetable beside potatoes, and every day we'll have at least two servings of fruit. We're going to specialize in whole grain cereals and whole grain bread, but you admit that nobody can make better spoon bread than you can or whole wheat rolls either.

NORA: Well, I don't like the sound of it but I'll do me best. Sure, this is no year to be getting uppity about my job. I'd be lost entirely if I was to go any place but here. We'll see—but remember, I ain't promisin' a thing. I'm guessin' that your father will be looking for a good thick steak with french fries and onions before this month's out. But Ann, you know I want you to have your chance and I'll help all I can.

ANN: You're a dear, Nora. I knew I could bank on you and maybe if we're good enough managers we can have what you call a "decent meal" once or twice during the month. You know in order to really test out our plan I've had to weigh everybody; Mother's all right; Dad is a little overweight and inclined to be a little jumpy and nervous about things—money worry I guess; Don is O.K. and Fred's five pounds underweight and I'm a pound and a half underweight. What I hope will happen is that Fred and I will put on a little and father will take off a little, and that we won't have any colds this month. Now Nora, three cheers for a good start—I'm rooting for you! (*Runs off stage—Nora stands looking after her admiringly, but shaking her head.*)

Scene II

Living room of Ann's house—six months later—Father and Mother sitting reading evening paper.

Door bell rings very insistently—Peggy, Ruth, Betty and Jane burst into room without waiting to be let in.

ALL TOGETHER: (*Excitedly*) Where's Ann? Where is she—have you heard the news? (*Ann enters—Nora right behind her*)

ANN: Oh, thank goodness, it's just you—sounded as though we were being held up or something. Seems to me I heard my illustrious name mentioned. Is it I you crave, fair damsels?

JANE: Is it you we crave—and how! Have you heard the news? Mother came home from the 20th Century Club all agog. Didn't you go today, Mrs. Worthington?

DAD: For mercy sake, Jane—end the suspense—what is the news?

JANE—BETTY—RUTH—PEGGY: Why, Ann's been given the scholarship—meaning four years at college! (*All join hands and execute a war dance. Mother and Ann and Dad look astounded. Mother finally gets order and girls sit on the floor. Nora appears at the door to listen.*)

MOTHER: Now, Jane—what is all this; there's only one scholarship and that's for civic achievement. It's never been awarded to an applied science student before and what's Ann done to get it?

BETTY: Why, it's her Adequate Diet plan, of course. You know without my telling that Ann's the only one that really has carried that out for the whole semester. Last week the members of the scholarship committee visited school and Mr. Duncan suggested that they ask Miss Craig about any outstanding work in her department. Well, you all know what happened. Ann's getting asked to tell all about it at the open meeting of the 20th Century Club. You know Mrs. Worthington, how surprised all the women were that Ann could do all that. (*Ann curtsies with much manner*) Well, the scholarship committee went into a huddle (*laughter from everybody*) and decided that Ann had done something that was of more use to the community than anybody else in school.

ANN: Somebody pinch me—I'm not dreaming, am I? I did eat about a square yard of cheese souffle for supper and it may be that it brings on delirium. (*Telephone bell rings—Ann answers.*) Yes, Mrs. Carson, this is Ann speaking—the girls are here right now and I'm just trying to realize it's true. It's just too wonderful. It doesn't seem fair to get all that money for just doing things that have been good for us. But don't worry, I'm not refusing it. It's marvelous and I never can thank you and the whole club—goodby and thanks again. (*Ann comes back beaming*)

RUTH—BETTY—PEGGY: And to think that we did all that grumbling at Miss Craig! Why, she's a "Shero"—let's go and serenade her. (*Four girls leave*) (*Dad and Mother look at each other and smile.*)

DAD: Figuratively speaking—both physically (*throws out his chest and straightens up*) and financially Ann certainly has *shown* us. That's a most capable and attractive daughter you have Mrs. Worthington—I congratulate you!

END

Children's Clothing

By

Anna E. Bayha

Head of Clothing Department
Michigan State College
East Lansing, Mich.

The first part of this article was published in September and dealt with the functions of clothing from the hygienic viewpoint, including types of fabrics, colors and importance of proper fitting.

Motor Accomplishments in Dressing

TO select or make clothes adequate from the viewpoint of a child's motor skills, one must know something of what to expect of a child at various periods of its development. To be sure, each child is an individual who must go along at his own pace, but in terms of the average child. (7)

At 3 months
- A child waves its arms and legs vigorously.
- No clothing should limit these movements.

At 6 months
- He turns himself over in crib.
- Can propel himself from one place to another.
- With some support under arms, can make a few stepping movements.
- Dresses must be short enough to permit this.

At 9 months
- The child has worked out some form of creeping.
- Rompers are in order.
- There must be freedom from petticoats.
- No dresses must upset him when he tries to stand.

At 12 months
- He walks.
- Can lower himself from standing to sitting position.
- The learning of undressing begins.
- Can pull off a stocking and a cap

At 18 months.
- All accomplishments more skillful.
- He can walk, run alone, climb.
- He can take off his shoes and stockings.
- Use his handkerchief. Pockets must be provided.
- Wash his hands. Cuffs should be loose enough to slip out of the way when this is necessary.
- Has control over bowel and bladder elimination.

At 24 months
- The favorite game is digging in sand.
- Clothes should allow this exercise.
- Child can successfully manipulate a zipper and clip.
- These patent fasteners make it possible for the child to help with the dressing process.

At 36 months
- Can completely undress himself.
- Large front buttons can be managed.
- Hangs up his clothes if loops and low hooks are provided.

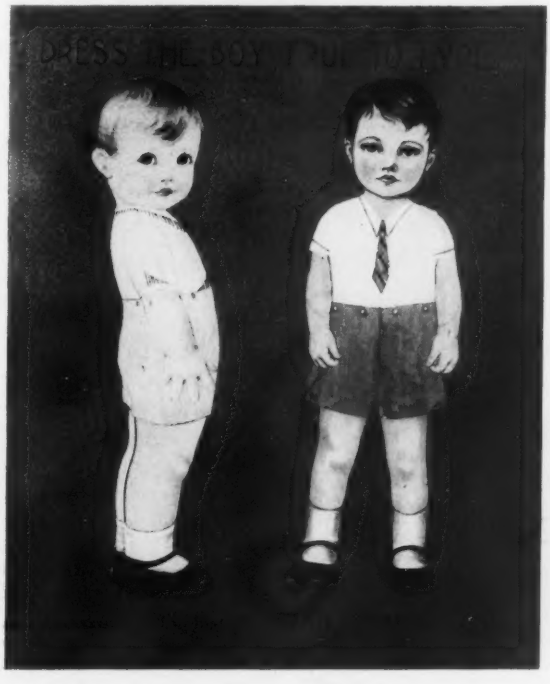
At 33 months can button 2 buttons in 170 seconds. (8)

At 42 months can button 2 buttons in 34 seconds.

At 42 months can button 4 buttons in 76 seconds.

At 48 months.

1. A child can care for himself at toilet if clothing is not too complicated.
   a. Plackets must be long enough.
   b. Fastenings few, simple, and in conspicuous places.
2. Can completely undress.
3. Dress himself except difficult and heavy winter clothing. May need assistance to tuck in long underwear.



Design

Simplicity should be the keynote with the slogan, "Easy to make and keep clean for the mother and easy to wear for the child." A mother's hobbies, short cuts and personal preferences should al-

(Continued on page 331)

The Power Laundry And Its History

By
Pauline Beery Mack
Pennsylvania State College

WITHIN the last relatively few years there has been a steady increase in the movement of laundry work away from the home to the commercial power laundry. Many factors contribute to this—the small apartment with its attendant difficulties for home laundry the increase in the numbers of women in industry who have no time for handling the family laundry, and last but not least the greatly increased efficiency and higher standards of the laundries themselves.

A visit to a large power laundry offers a great deal of interest to students. Most laundrymen are glad to have you visit their plants. They are proud of their equipment and of their trained employees, and are glad to have you see how they handle your articles of wearing apparel and household linens. No modern housewife's education is completely rounded out unless she is familiar with the power laundry processes.

To know something of the history of any industry helps in understanding its methods and in giving it meaning. The early history of the laundry industry proves no exception as the following facts will show.

The Beginnings of the Laundry Industry

It is interesting to note that the laundry industry was started as a sanitary measure in London in 1832, during a cholera epidemic, when it was noticed that the greatest mortality occurred in the dirtiest sections of the city, and that cleanliness assisted in combating the disease. By 1846 the value of the commercial laundry as a health measure had been so thoroughly established in that city that laundry plants were built from public moneys.

The following sketch of the early history of the laundry industry in America is taken from "Textile Fabrics" by George Johnson.

"In America, the laundry industry was originated about 1827 with the invention of the detachable collar. Nine years later, Independence Stark, a manufacturer of Troy, New York, established a laundry to take care of the product of his own factory and of near-by collar makers.

"As far as records show, the first American laundry, as one thinks of laundries today, came into existence in 1851 as the Contra Costa Laundry at Oakland, California. It was started for the purpose of washing the clothing of the men who were attracted to the West by the gold rush. The walls of the building in which the first laundry of record was operated may still be seen, having been permitted to stand when the plant was enlarged some years ago.

The First Commercial Washing Machines

"The first washing machines were made of half-barrels, in which the soiled clothing was placed and washed by means of agitation. The agitator was a crude affair made of wagon-wheel spokes. Although it is not stated in the history of the first laundry, it is presumed that the power applied to the agitators was that of brawny, masculine arms. The water was squeezed from the clothes by a crude home-made wringer, the drying process being that of the old-fashioned clothes line.

"In 1858 an inventor conceived the idea of washing clothes by machinery, and in the following year the first rotary washing-machine was made by Hamilton E. Smith at Pittsburgh, Pennsylvania. The inventor soon discovered that his machine did not operate efficiently, and it was not until 1862 that he obtained a patent. In 1863 he secured patent protection on the first self-reversible motion attachment to the machine.

"The first steam laundry in the true sense of the word was fitted up for operation in 1863 at Pittsburgh at the St. Charles and Monongahela House. From 1858 until 1873 this same inventor (Smith) experimented with an ironing machine as a result of which the present-day flatwork ironer was developed.

Family Washings Go to the Laundry

"For a number of years after the establishment of power laundries, laundry service was confined to the renovating of men's garments, starched pieces, and hotel and restaurant linen. It was not until about thirty years ago that family washings first found their way into the public laundry. It has been stated that the first families to patronize the public laundry were located in the mill districts of New England. This patronage was due to the fact that textile mills drew so heavily upon the supply of female labor that it was impossible to find wash women to come into the homes to do the weekly washing. The solution of the New England housewives' problem of handling the washing, namely, the sending of soiled pieces to the laundry, has gradually spread all over the country, until in the last five years the laundry business has become over a half-billion dollar enterprise.

"Although thirty years ago power laundries were doing practically no family work, at present a considerable number of families of this country are patronizing commercial plants. This increase in business is an indication that the nation's home managers will soon handle their wash-day burdens largely as they are handling their spinning and baking problems; the work will be done away from the home."

What Goes On in a Modern Laundry[1]

In the United States at the present time there are 6,216 commercial laundries exclusive of hand, Chinese, linen supply, hotel, and institutional plants. What goes on in these establishments? What do the one hundred and twenty thousand persons employed in these laundries do to earn the $214,999,515 which they annually receive in salaries? To answer this, let us follow the commercial laundry process through its various steps.

Soft Water and Laundering

One of the difficulties which frequently has to be overcome before one can wash soiled pieces efficiently is the softening of the supply of water. With the exception of some of the waters found in New England, New York, and New Jersey, the Pacific Northwest, and certain of our Southern States, the available water supply in most regions contains considerable quantities of impurities which have the property of reacting with soluble soap and converting it into sticky curds of insoluble calcium and magnesium compounds.

In home washing methods, attempts are often made to overcome this effect by adding softening agents like trisodium phosphate or sodium carbonate to the water before the soap is used in order to precipitate the impurities which react with it and destroy its effect. In power laundries, however, hardness must be removed from the water before it is used for washing.

By passing hard water through a tank holding a bed of what is known as zeolite, it is possible to soften it, because of the fact that the calcium and magnesium compounds in water which cause hardness exchange places with the sodium

[1] In the preparation of the section of this paper dealing with the laundry process, the author was assisted by George Johnson, Research Director, American Institute of Laundering, Joliet, Illinois.

which is present in the insoluble zeolite. This process continues just so long as there is any sodium available in the zeolite bed to exchange positions with the hardening constituents of the hard water. When all of the sodium has been utilized, the zeolite bed is treated with a concentrated solution of salt and backwashed with water, after which it can be used to soften more hard water.

Just how serious a factor hard water can be is shown by the following table:

Grains of hardness	Pounds of neutral soap consumed per 1000 gallons of water
1	1.5
2	3.0
3	4.5
4	6.0
5	7.5
7.5	11.2
10.0	15.0

In addition to the destruction of soap with its resulting increase in washing costs, hard water causes the development of a gray color in white fabrics, because of the adherence of the sticky curds of insoluble compounds formed by the reaction of the soap and the minerals in the hard water. These also hold countless tiny dirt particles to the work which is being washed. For these reasons commercial laundries have almost universally installed water softeners.

Marking-In and Classifying

When a bundle comes to the laundry it is taken to what are known as "identification tables." At these tables or booths the bundles of soiled clothing are sorted and identified. If the bulk or complete identification system of washing is being used, each piece is suitably marked. If, on the other hand, the "unit" system is being used, the pieces are not marked, as a rule, but are divided into certain separations, each of which is placed in an open-meshed bag. Each bundle is given a series of numbered pins stamped with the same number and the nets are securely closed with a master pin bearing the number assigned. The smaller pieces, and colored articles, woolens, silks, and rayons are individually pinned and washed in different washers, the washing formula used depending on the articles handled.

The Washing Process

The removal of dirt is mechanical as well as chemical in nature. During laundering, solutions of soap or a mixture of soap and alkaline materials, such as sodium carbonate, trisodium phosphate, neutral soda, and sodium silicate, act in three ways:

1. They wet out the soiled pieces and the particles of dirt.
2. With rubbing or similar mechanical action, the dirt particles are loosened from the fabric, each tiny piece of dirt or globule of oil or grease being surrounded with a thin film of soap.
3. Because of the presence of this surrounding film of soap, the dirt particles are prevented from adhering to one another or again attaching themselves to the cloth.

In power-laundry washing practice, it naturally is impossible to wash each piece by hand because of the thousands of tons of soiled work which come to the various laundries in the course of a week's time. Hence, the rubbing and scrub-board method of loosening dirt commonly used under home conditions cannot be used commercially. In order to provide a substitute for this rubbing action of home washing, power laundries use special types of washing machines. These washers are made of wood or metal and consist of an outer shell, which holds the water and supplies, and a perforated inner cylinder which holds the soiled articles. This inner cylinder usually revolves a number of times in one direction through each suds of rinse and then reverses and runs the same number of revolutions in the opposite direction, the reversing continuing throughout the entire process. This changing of direction prevents any tangling of the clothes. In the case of the most commonly used type of washing machine, each cylinder is equipped with a number of projections or ribs that lift the load to a certain height and then allow it to drop back into the various suds or rinses. With such a practice, a squeezing action is obtained which loosens the dirt.

Because of the fact that the heavy mechanical part of washing is done by machines, it is easy for a washman handling from 30 to 650 pounds or more of

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Courtesy of American Institute of Laundering and "The Chemistry Leaflet."

Bird's-eye view of a large, modern commercial laundry.

Institutional Methods Of Dry Cleaning Synthetic Fabrics

By
W. E. Coughlin Ph.D.
National Association of Dyers & Cleaners

THE term *Dry Cleaning* is applied to those methods of cleaning which utilize as the main cleaning fluid a solvent which is immiscible with water.

The need of dry cleaning methods for the cleaning of garments was probably first felt when it was found that fugitive colors would bleed in water solution and that many stains could not be removed by water processes. The tendency for water immersion to produce shrinkage in garments may also have been a contributing factor toward the introduction of dry solvents.

In the early periods of development in the dry cleaning industry the processes employed were very crude and insanitary. The essential process consisted in the mechanical agitation of garments in a receptacle containing naphtha or similar cleaning fluid. Successive batches of garments were immersed in the same solvent with practically no provision made for clarification of the used solvent other than by gravity settling of foreign matter held in suspension.

The dry cleaning industry has made rapid advances during the past ten years, due in no small part to technical research work conducted at the National Association Institute of Dyeing & Cleaning at Silver Spring, Md. The results of the research work carried on by this trade association, although primarily intended for its members, have become disseminated throughout the industry as a whole and have been responsible for many important changes in practice.

In the modern system of dry cleaning the processing of garments is divided up into three major operations, the dry cleaning operation, where the major portion of stain removal and cleaning takes place, the spotting operation, where all unusual stains are removed, and the finishing operation, where the garments are ironed and finished to look as much as possible like the new garment.

Dry Cleaning Operations

In this operation the garments, which have been inspected and suitably marked for identification, are subjected to the major cleaning operations. The garments are first introduced to a large revolving perforated cylinder which is encased in a metal container which holds the solvent used in the cleaning process. The solvent used in the majority of plants is a petroleum distillate, similar to but not identical with gasoline. The cylinder in which the garments are placed revolves for two or three turns in one direction and then the same number in the opposite direction. This process is continued for a period of twenty minutes, during which time the soil and dissolved stains are removed from the washer by a continuous flowing system whereby clean solvent enters at one end of the tank and the dirty solvent runs out at the other.

After the garments have been thoroughly rinsed of all loose dirt and solvent-soluble stains, they are placed in a "strong soap washer" where the same operations are carried out, using a solvent containing a high percentage of soap which contains a considerable amount of moisture. The soap used in this solvent is, of course, different from the ordinary water-soluble type of soap because water-soluble soap is not soluble in dry cleaning solvent. The base for many of these soaps is tri-ethanolamine Oleate, a soap prepared especially for the dry cleaning trade. It is soluble in water but due to the fact that the basic radical in the soap is comparatively weak, it is also dispersed very readily in dry solvents. The function of this soap is to remove water soluble stains and perspiration which otherwise would require special spotting operations involving the use of water.

After the garments have received a thorough washing in the soap solution, they are again rinsed with clean solvent in order to remove all traces of soap, which might produce odors if left behind in the garment. The garments are next extracted in a centrifugal extractor where the excess solvent is recovered. After extraction the garments are deodorized.

Silk garments are hung up in a specially constructed dry room which utilizes a clean current of dry air as the drying medium. Men's suits and overcoats are dried by a much quicker process involving the use of a tumbler which is a cylinder of wire net work encased in an air tight container. The garments are tumbled around by the rotation of the cylinder while a current of dry air is forced through the cylinder. Live steam is also introduced into this cylinder in order to prevent explosions which might be caused from frictional electricity produced in the garments.

Two other general cleaning fluids have recently been introduced to the dry cleaning market; one of these is carbon tetrachloride, sold under the name of zoric fluid; the other is trichlorethylene. Neither of these solvents has yet given evidence of displacing petroleum distillate as the general cleaning agent but both have had marked success since their recent introduction to the trade.

Spotting Operations

After the garments are dried, they are sent to the spotting department, where difficult stains of all types are removed by operators known as spotters. The usual equipment for this department is a porcelain table shaped like an ironing board upon which the garment is placed while stains are being removed. Hundreds of different stains are removed in this department. Some of the most common are the following:

Paint
Lacquers
Blood
Lipstick
Inks
Food stains
Medicine stains, etcetera.

It is obvious that the spotter must be somewhat of a textile chemist in order to remove the stains properly without injuring the fabric or the dyestuff. Certain stains, such as many types of paints, are insoluble in all types of solvents and, consequently, must be removed by lubrication with some heavy fluid such as oleic acid. The insoluble pigment in such a stain is gently rubbed away in the presence of a lubricant by the use of a bone spatula. The prevention of rings in the removal of stains is also one of the problems which the spotter must take into consideration.

Many well equipped plants have a compressed air line running to the spotting board so that water may be sprayed on to the area which has been worked upon in such a manner that no ring will be produced. The excess of water or other solvent used in the removal of a stain is usually absorbed by the use of a chamois pad before the re-agent has had an opportunity to produce a ring. To illustrate the chemistry involved in the removal of stains, the removal of one typical stain will be described.

The stain is argyrol, which is a medicine containing silver nitrate, together with some albuminous material. Before any re-agents can react on this stain, it is necessary first to remove the albumin

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The Far Reaching Effects Of a Summer Home Project

By
Hazel Hatcher
Home Economics Instructor
Triplet, Missouri

NOT to all but to many a teacher there comes the realization that she has touched the spark which is to grow and deeply influence for better the life of some boy or girl in her keeping. Such a realization not only brings great joy but a feeling of reverence for, and humbleness in her profession.

How this spark was touched, how it grew, and how it seems to be affecting a whole neighborhood is a true story of one girl's summer home project work carried on as a part of her vocational home economics course in a small Missouri high school.

Dorothy is a sixteen-year-old high school junior whose home is in the Grand river bottoms, just inside one of the recently constructed levees. She is the oldest girl in a family of six children.

On the teacher's first visit to her home the many lovely old shade trees in the yard looked sadly out of place as the background for the rest of the house and lot, which had a most ill kept, run down appearance. Inside, the house was very clean but it was in evident need of repair and while the teacher chatted with the mother she couldn't keep from noticing the flies buzz from the cow lot in through the unscreened windows and doors to the young children playing on the floor and then out again, perhaps to the lot where the hogs were feeding. Outside, the front yard was grown up in weeds until the house was scarcely in evidence from the road. All in all there seemed to be no family pride in the home though there was a noticeable appreciation for and interest in the progress Dorothy was making in her high school studies.

Many times following this first visit did the teacher suggest very small home beautification projects as a beginning for Dorothy, but always the answer was, "Our house is just rented. I have so little to work with and there's such a lot needs done that it's hopeless to begin." As the months sped by it seemed to the anxious teacher as though Dorothy's name must be added to the list of her own failures to accomplish that for which she had hoped and worked.

And then one day in a private conference Dorothy outlined three projects which she intended to complete by the end of the summer home project supervision. Knowing that it meant more work than one young girl should do in such a short time the teacher, fearful lest she discourage her, gave her as many helpful suggestions as she could, never dreaming that she would be privileged to see all of them actually carried through to completion within the next few weeks.

The first project planned was to design and construct or select a summer wardrobe for the little sister aged seven years. At a total cost of no more than two dollars a wardrobe consisting of pajamas, underwear, a smock, several print dresses, and two dress-up ones were made. Scraps of material and discarded dresses of elder sisters were used whenever possible. A pair of pajamas made from two flour sacks, tied and dyed, and then included in the wardrobe showed Dorothy's skillfulness in using what she had.

The second project was to transform a weed patch in the side front yard and between the house and barn, into an attractive flower and rock garden. Just inside the levee three miles from Dorothy's home, was a fallen down house, materials from which she easily obtained the owner's permission to use. Tearing laths from the house, carrying them three-quarters of a mile, and then hauling them home where the nails had to be removed before they could be used was just the beginning of the project. From "Rock Riffle," over the levee at some little distance, Dorothy hauled home several wagon loads of rocks. With enough laths on hand the forty by sixty-five foot garden was fenced with laths which were later whitewashed. Stepping stones beginning at the arched entryway led past the many flowers, through a large archway, down past the rock garden section and on to a summer house, located in the back and to the left. Flowers from the woods beyond the house, donations of all kinds from interested friends, and three packages of seeds from the store were arranged and planted according to height and color in the flower garden section. Beyond the large arch and to the right, violets peeping out from among the rocks looked as if they were enjoying their new home in the rock garden. A bird bath made from an old keg and discarded wash pan and painted a pastel shade was placed near an interesting looking feeding place for birds which in reality was nothing but a cornerstone, taken from the foundation of the fallen down house, and nestled among the rocks near the bird bath. The homemade painted bench inside the summer house and vines from the woods planted

A snapshot of Dorothy's sister, in the new garden, wearing a dress from her summer wardrobe.

there made it a useful and attractive spot.

Outside of this fenced enclosure Dorothy's plans and work began to show results. The weeds in the yard were cut down, bushes from the woods were transplanted to form a hedge around the house and flower boxes on the porch made the house look inviting.

Neighbors of the bottomland as well as every member of the family seemed quite as enthusiastic over the progress as did Dorothy and her teacher and each one seemed afraid he or she wouldn't do their share in this interesting work. At one time, ten individuals were cheerfully working. The man who managed this whole section of the country for a city realty company was so surprised and pleased with the flower and rock garden that he offered to furnish all materials needed for the third and last project, which was to change the nail riddled, much dilapidated side porch facing the flower and rock garden into an attractive outdoor living and dining room. He even sent a carpenter out from a neighboring town to screen the porch and to do the necessary repair work before the project began.

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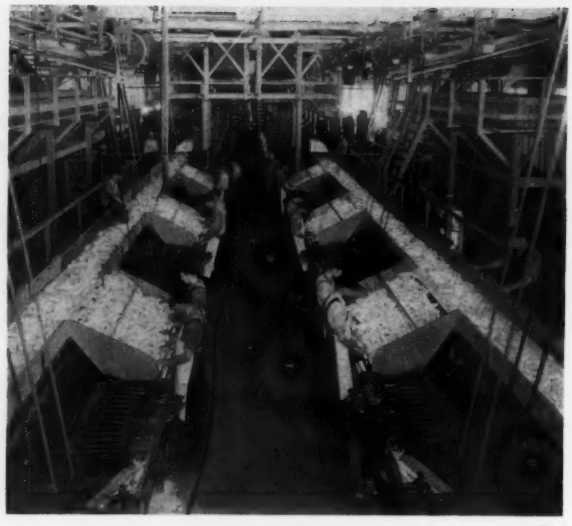
The Romance Of Modern Foods

By
Blanche Theodore



Impressive quantity handling of corn, which pushes husked ears to the intelligent machinery which takes off the kernels, fills the cans, cooks, seals and delivers the sanitary can for its identifying label.

THERE has seldom or never, been as much food romance as there is today in the efficient era of the Machine Age, when even homes with an average income can have on the table salmon from Alaska, fruits from the great California orchards, grapefruit from Florida, coffee from Brazil, pineapple from Hawaii, peas and corn from the middle west all the year around, delicate white and green asparagus at any time of the year, tiny green limas, whole chicken smothered in a delicious jelly, whole hams, boned, so deliciously cooked that to think of them makes even the rhapsodies of that great gastronomist, Brillat Savarin, seem, dietetically, of not too much importance.

For, after all, Brillat had mostly to prepare his meals from viands to be found locally in the country; he could not summon them to his table, as can any of us today, from far and near, practically prepared, with merely the formality of heating and serving.

That is the modern witchery and convenience of that army of sanitary and scientifically tinned foods, which the Machine Age has made possible, and which Pasteur and later scientists have made safe to eat. One could not conceivably exist without the other, since the machinery which makes today's sanitary can is a highly developed product of a wondrous age of mechanism, in which American automatism and repetitive processes lead the industrial vanguard. Cans are produced today from sheet steel coated with tin, by finely gauged, seemingly human, automatic machinery in the enormous number of approximately eight billion cans a year. The accelerated rate of production of these convenient and friendly "cooking pots" which hold our foods until needed for use, is an awesome thing, when it is known that the first canners made cans at the rate of sixty a day by hand labor, and that now more than two hundred a minute are made by machinery.

Up to the time of the Civil War, can making and can packing of food was a handmade business. But in the enormous gathering of machine forces which followed the making of peace, the industry of food packing in tins progressed rapidly. The nation had learned a great deal from the soldiers about canned foods. This was particularly true as to gallant Gail Borden's condensed milk in cans, found so valuable for sick and invalided soldiers. And the California canned fruits which were used as a luxury in officers' mess. Consumption, which had been five million cans a year before the Civil War, grew directly after it, to thirty million cans.

Canners could no longer pack their cans and also make them. In 1885 a thoroughly machine age business split off from the food packing industry, that of can making. Later there was a third division, that of machinery making for can manufacturers. Today the can making and can packing industries are nearing the billion dollar class.

Did you ever stop to think what would happen to surplus harvest yields, corn, tomatoes, peas, beans, peaches, pears, apples, cherries and many others, were it not for the convenient, safe, and sanitary tin in which they are preserved for use thousands of miles away, months and many times years after being canned?

Thousands of bushels of tomatoes waiting for Machine Age conversion into canned tomatoes, tomato juice, catsup, or to accompany spaghetti, baked beans and many other products.

And let no one think he is not being adequately nourished should he essay a canned foods diet, to say nothing at all about the common assumption that when a housewife opens a can of foods for the consumption of her family she is somehow cheating them of that nutrition which they would have if she fed them foods which had not been previously cooked. There has never been any question that cooking destroyed the protein or carbohydrate value of the foods so treated. Doubt seemed to center on the vitamin and mineral, specifically the vitamin, value. This has been recently dispelled by no less an authority than Dr. Walter H. Eddy, of Teachers College, Columbia University. With his research colleague, Dr. E. F. Kohman, he has recently devoted eight years to the study of whether canning destroyed the vitamin content of fruits and vegetables.

The results of these authorities, published in *Good Housekeeping* of September, 1931, should be enormously educational and universally convincing that these machine age foods are not only sanitary and safe, but adequately nutritive.

"Nutrition experts," says Dr. Eddy, "have advocated a greater consumption of fruits and vegetables, largely because of their vitamin content, their mineral salts, their alkaline residues and the bulk and roughage they add to the diet. They also contribute some

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The School Lunch

Edited by Martha Westfall, Director of Homemaking, New York City Schools,
Josephine M. Adams, Assistant Director of Homemaking.

Emergency Lunches in New York City During the Vacation Period

By
Martha Westfall
and
Josephine Adams

In New York City 1,608,378 meals were served to needy children during the summer vacation period. 11,784 quarts of milk, 9,496 pounds of bread and 1,225 pounds of butter were used daily. The fruit bill for the summer totalled $17,037, and ice cream cost $16,-152. The total amount spent for food for the summer period was $189,620.48, and all of it, as well as the operating costs, was contributed by administrators, supervisors, teachers and other employees of the Board of Education.

ALL school lunches served in New York City are part of the general educational plan as has been described in previous issues of *Practical Home Economics*. These articles have pointed out how, during the past two years, the school lunch problem in New York City has assumed enormous proportions due to the necessity for feeding thousands of needy children. The establishment of emergency lunch rooms and kitchens and the way in which the work was organized and is being carried on was described in the March number of this magazine. When the schools were closed for the vacation period, it was then necessary to make other arrangements to carry on the actual feeding of real emergency cases throughout the city during the summer.

A two-fold plan was adopted. One, to establish centers in convenient school buildings, and the second to deliver bread and milk to the homes of needy families. In the first plan, those schools were selected which would draw from the largest areas. These centers not only took care of the children who were within walking distance, but also served as stations in which food was prepared and sent by trucks to schools which were farther away.

This plan not only made supervision easier but lessened the expense of service. The latter was an item of utmost importance since all the food and personnel had to be financed from contributions of administrators, supervisors, teachers and other employees of the Department of Education, whereas during the school year the cooks, helpers and truck drivers were financed by the general relief fund of the city. During June this general fund had become exhausted and the consequent curtailment of funds necessitated a more limited menu which, although filling nutritional requirements, lacked the variety of the lunches previously served.

Bread and butter sandwiches, filled sandwiches and two-thirds of a pint of milk were served to each child daily. In addition to this, fresh fruit and ice cream were served alternate days.

The most competent of the helpers were put in charge of the individual lunch rooms. These helpers had had experience during the year and were qualified to carry on the mechanical side of the lunch service. However, the daily and weekly orders had to be handled by persons of a higher type of intelligence. Consequently teachers on the substitute list who had given exceptional service in the schools and who were in need of summer work were assigned to this duty. The general plan of the lunch room operation was explained to them in conference, general rules laid down for them to follow, order blanks and accounting sheets furnished, and the general responsibilities involved were delegated to them.

The successful way in which the summer emergency lunches functioned justified the plan adopted. The general helpers and substitute teachers were paid weekly in cash at the rate of $10.50. One hundred and seventy-four substitute teachers and three hundred and thirty-two helpers were employed in the one hundred and eighty schools receiving the lunches. (Of these schools nine were preparation centers.) Twelve trucks were required to deliver the food. The daily number of luches served was 29,061, and the total number served during the summer amounted to 1,608,378. A further analysis shows:

Milk—Quarts served daily	11,784
Milk—Total for summer	648,120
Bread—Pounds served daily	9,496
Bread—Total for summer	564,904
Butter—Pounds served daily	1,225
Butter—Total for summer	74,584
Fruit—Total expenditure	$17,037.27
Ice Cream—Total expenditure	$16,152.70

For the Family Relief milk was delivered daily to the homes, and bread obtained at the various centers when practicable. Otherwise, bread was given out at the grocery stores to holders of bread tickets.

The grand total for cost of food reached $189,620.48 and that for personnel, $58,980.16.

It is the policy of the Home Making department to serve only bottled milk in ½ pint containers. However, it was decided that twice the quantity of milk could be served at the same cost by dispensing loose milk. The milk was delivered daily in sealed cans, these cans were placed on a rocker device and poured directly from the cans into the aluminum cups bought especially for this purpose. In this way no milk was left exposed to the air and only a minimum amount of handling was necessary. Much of the objection to serving loose milk was thus eliminated. The individual cups were sterilized daily as were the spoons used for the ice cream. No other utensils were required.

In addition to the food provided, the following articles of clothing were also distributed:

Boys' suits	41
Boys' sweaters	27
Boys' stockings, pair	202
Boys' knickers, pair	90
Boys' blouses	205
Boys' underwear, suits	201
Girls' jackets and coats	4
Girls' underwear	138
Girls' middys	32
Girls' skirts	29
Girls' stockings, pair	178
Girls' sweaters	23
Girls' dresses	109

An Experiment in Nutrition

By

Martha Pratt Haislip

Lumberport, West Virginia

DURING the past winter an unusually interesting and helpful experiment in nutrition was carried on by the classes of the Home Economics department of the Washington Irving High School, Clarksburg, West Virginia.

Mrs. Lillian C. Moore of the Home Economics department of that school, through personal contact and observation of the students, realized the need for a more practical method of instructing classes in nutrition than was offered by the regular class work. Also the need for a more adequate diet was apparent among a large percentage of the pupils.

The usual method of instruction in nutrition provided charts, lectures and the use of white rats for experimental purposes. Yet in the face of the crying need of food for human consumption, it seemed a pity to confine experiments to animals of any kind.

Mrs. Moore, after studying the problem thoroughly, evolved a plan which not only adequately provided practical class room instruction but also materially benefited three students of the school.

With the cooperation of the principal and the school physician, three girls who were badly in need of nourishment and were willing to be used for experimental purposes were selected from the student body. Before the experiment, which began the middle of February, each girl was carefully examined, weighed and measured. Of the students participating in the experiment, No. 1 was found to be suffering from bad tonsils and was sixteen pounds under weight. No. 2 also possessed diseased tonsils and was twenty-three pounds under weight. No. 3 was twelve pounds under weight and was living under home nutritional conditions that obviated good school work.

These results were entered on the chart which was meticulously kept during the three months of the experiment.

At the beginning of the experiment, Mrs. Moore divided her classes into groups of two. Each group was responsible for two periods of one week each during the three months. These groups planned, cooked and served each school day, breakfast, luncheon and a four o'clock feeding to the three girls under observation.

The early morning cooking classes studied, discussed and suggested food for breakfast the following morning. With this problem before them Mrs. Moore was able to interest the classes in a practical manner in the relation of foods to nutrition and the building of strong bodies. The group directly responsible for the meal under discussion conferred with Mrs. Moore and together they planned the menu. These two girls of the group cooked and served breakfast, reaching school earlier than the usual time to accomplish this during their periods of responsibility.

The last class of the morning not only studied the food used for luncheon but prepared it as well. The meal was served by the group chosen from this class. The last afternoon class prepared the four o'clock feeding which the girls themselves usually procured.

The meals served were all carefully planned as to caloric value, food combinations, costs, etc. Breakfast was planned to provide approximately six hundred calories; luncheon, nine hundred; the four o'clock lunch, three hundred.

Representative Menus

BREAKFAST

Cod liver oil	33	calories
1 orange	100	"
Eggs on toast	170	"
Buttered toast	100	"
Milk	160	"
Total	563	"

LUNCHEON

Liver	200	calories
Escalloped potatoes	250	"
Kale	25	"
Lettuce, mayonnaise	125	"
Pineapple gelatine	100	"
Milk	160	"
Cod liver oil	33	"
Total	993	"

FOUR O'CLOCK FEEDING

Malted cocoa milk beverage	213	calories
Cookies	100	"
Total	313	"
Daily total	1869	"

BREAKFAST

Grapefruit	100	calories
Oatmeal	100	"
Sugar and cream	100	"
Poached egg on toast	125	"
Milk	160	"
Cod liver oil	33	"
Total	618	"

LUNCHEON

Swiss steak	200	calories
Gravy	100	"
Potatoes	125	"
Beets	50	"
Carrot salad	125	"
Bread and butter	100	"
Milk	160	"
Cod liver oil	33	"
Total	893	"

FOUR O'CLOCK FEEDING

Malted cocoa milk beverage	213	calories
Daily total	1724	"

Each school day the girls received one serving each of meat or meat substitute, one egg, one raw salad, one cooked succulent vegetable, one fresh fruit, one cooked fruit, cod liver oil, bread, butter, milk, etc. Each girl promised to eat sufficient dinner at home to bring the total amount of daily calories to approximately twenty-four hundred. Written suggestions for week end meals as well as home dinners were given the three girls. These suggestions were kept well within the reach of their home food allowances. The planning of these gave the food classes a valuable lesson in practical meal planning at a minimum of cost to produce a maximum of nutrition.

A few representative menus of meals served during the three months of the experiment are shown.

After three months' feeding of which the above menus are representative, the following results were obtained:

Despite an epidemic of influenza from which each girl suffered, No. 1 (still handicapped with bad tonsils) gained six pounds with a resultant increased interest in school work.

No. 2, despite diseased tonsils, gained seven pounds.

No. 3 gained the twelve pounds she was underweight and an extra half pound.

As for the classes that conducted the experiment, each member felt that she was doing a real piece of work for a definite end. The classes prepared and served meals during their regular work period which under usual class methods would have been impossible due to lack of available time. And while they were doing this work, they were becoming more familiar in a practical manner with foods according to their caloric value, chemical content and their nutritional value in the everyday diet. In fact, during this three month period, they became food conscious for themselves and their families.

Altogether the plan proved itself to be practical. Financially, the plan added little expense to the budget for the department. The cod liver oil used was bought by members of the food classes who made and sold cakes and candy to pay for this item.

Not only was a valuable lesson gained in the practical knowledge of food values by members of the classes in the Home Economics department, but the girls under observation gained immeasurably from the adequate diet fed to them.

Such a plan might well be adopted by every school during this time of acute depression when nourishing food is the crying need of many of the pupils in our public schools.

An Attractive Lunch Room At Small Cost

By

Lonore Kent

"If of thy mortal goods thou art bereft
And from thy slender store two loaves alone to thee are left,
Sell one, and with the dole
Buy hyacinths to feed the soul."
—MOSLEH EDDIN SAADI

IT'S a marvelous thing to feed hungry children and to build the health of those improperly fed. With the limited resources at their disposal, the schools of the country that have undertaken the work are doing a truly great job.

Very nearly as important as the supplying of the food, however, is the creating of pleasant and attractive places in which the lunches are served. Inharmonious, uninviting rooms not only react unfavorably on the moods of all who come within their walls, causing ill-temper and unhappiness, but also affect the health. Science has discovered that good humor facilitates the digestive processes. Assuredly, food tastes better if the surroundings are restful and beautiful. It's worth much time and effort, certainly, to build a background that will delight children and, at the same time, make the tasks of the workers more pleasant.

You are keenly interested in a school lunch project you say? You're fully aware, too, of the value of an attractive setting—but—you've had many obstacles in your way. You've had to combat lack of interest, lack of money and lack of cooperation. It has been all you could do to accomplish the actual serving of healthful food.

Yet the thing that seems impossible—the decorating of the lunch room—can be the factor which will awaken interest in your work and bring the desired cooperation and financial assistance.

Of course I don't know the exact difficulties with which you are faced, but perhaps if we set up a theoretical problem and work out a solution, it will help a little in the solving of your own.

The room set aside for the serving of lunches is large, high ceilinged, but badly lighted because it is partially below ground level. The walls are a discouraging, muddy, yellowish-green and the woodwork is dark and dull. Over in one corner there is a sink and space that lends itself to the establishing of the kitchen. Closely as we figure, there is hardly enough money to buy the equipment absolutely necessary. Certainly not a cent for decoration. While small amounts will be charged for most of the hot lunches, there is a sizable group of deserving children who will go hungry at noon if we do not feed them. Consequently, any profits that come from the small income must go to the charity fund.

The preparatory work progresses. Shelves are put in place. Pots and pans and dishes are selected. An old ice chest leans against one wall and unpretentious chairs and tables complete the furnishings. It's a rather dismal-looking room, to be sure, but we're ready to serve hot food to the youngsters who need it so bady and that, in itself, is a triumph.

But after the serving of the food becomes more a matter of routine, we cannot help but look wistfully and wishfully at the unpleasant walls and woodwork. Oh, for a change of scenes! A light cheerful color for the walls. Less gloomy woodwork. Colorful chairs and tables. Curtains at the tall windows. Plants on the window sills. Pictures on the walls. How can we do it when we have no money for decoration? Well, let's see. Perhaps there is another way. We must have paint, of course, and someone to apply it. Isn't Johnny Jones, in the fifth grade, the son of Mr. Jones who owns the paint store? Mr. Jones is our man. We'll arrange a contest for the art classes of the school, offering prizes for the best color schemes for the lunch room, illustrated in either crayon or water color sketches of the room.

When that is done, we'll go to see Mr. Jones and lay our problem before him. Perhaps we can suggest that boys from the school will work around his store on Saturday mornings to earn the paint we'll need. Mr. Jones may promise us the paint for the lunch room, for we can, and will, give him much valuable goodwill advertising in exchange for his generosity.

If Mr. Jones is unable to supply the workmen to apply the paint, we'll continue our search until we find a master painter who is willing to do the job in exchange for students' help in odd jobs over a period of time fully sufficient to reimburse him and for the advertising it will mean for him. The contest will rate a notice in the newspapers at its beginning as well as when the winners are announced. The prize for the winners will be a special party in the lunch room when the decorations are completed. Mr. Jones can display the prize-winning contest entries in the windows of his store and will doubtless find customers among the proud relatives who come to view the sketches in their places of honor.

But to go back to our lunch room. Let's work out a color scheme ourselves. Of first importance, of course, are the

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Meat as a Study Unit

By
Martha Logan
Swift and Company

IN a recent survey conducted in the middlewest, it was found that only ten per cent of the women who purchase meats ask for definite cuts. "Sixty-five per cent of all the meat buyers noted in this survey were women. The women looked over the displays of meat more carefully than the men buyers before making purchases. However, more than half the buyers appeared to have made up their minds as to the kind of meat they were going to buy before entering the shop."

Such a challenge to present home economics students as future homemakers increases the importance of the study of meats, marketing, and cookery in the present foods curriculum. But how to purvey all the necessary knowledge in the short time allotted to the study of meat becomes the next problem.

A suggested outline might be one on the following plan—

Lesson one—an interpretation of the word meat. A study of this subject would include the structure and composition of meat, proteins—what they are and why we need them, extractives and mineral salts, the importance of phosphorus, iron and vitamins in the diet, food value, digestibility, and why we should eat meat.

Lesson two—a general lesson on quality in all meats. Government stamps, packer's stamps, methods of grading and points to consider when buying meats.

Lesson three—Actual marketing practices. A visit to a reliable meat market or packing house with a study on the identification of cuts would make this lesson very valuable.

Lessons four and five—While the visit to the meat market or packing house is still fresh in mind a study of the meat cuts should be made in two lessons. The first lesson would cover the hindquarter cuts of lamp, beef and veal and their uses, Here a study of steaks and roasts with their names and relative tenderness could easily be made. Uses of the round, rump and shank should not be neglected or passed over lightly, however.

The second lesson takes up forequarter cuts and their uses, including less-known cuts such as short ribs, flank, chuck. If the foods classes have connections with the school cafeteria, a combination study of the two problems might be made here.

Lesson six—This is one of the most important in the light of the present day economic situation. The study is that of inexpensive methods of cookery. For instance, the subject of *stewing* with suitable cuts of lamb, beef, veal and pork with vegetable combinations would be the first topic. Pot roasting or braising, casserole cookery, and cooking in water would also be included here.

Lesson seven—Ham, bacon and sausage have become important meats in the American family menu. A study of their points of quality and methods of cookery would deserve the seventh lesson.

Lesson eight—This includes the so-called fancy meats. Special emphasis should be placed on the nutritive value and cookery of liver, heart, kidney and sweetbreads.

Lesson nine—A discussion of packaged meats or quick-frosted meats, what they are, their value and coming importance.

The suggested outline for lessons can be adapted to either a laboratory or a discussion period or to both. If the budget for laboratory supplies is limited perhaps a cafeteria meat project could be instigated with both the school lunchroom and the foods class profiting. Records should be kept of the new dishes, proportions, servings, and other points of interest.

For instance if the class were studying methods of inexpensive cookery, the preparation of a boned rolled plate would afford a good lesson in cooking forequarter cuts and would make an appetizing inexpensive meat dish for a school lunch.

For this cut the short ribs are first removed and the remainder of the plate boned and trimmed of superfluous fat, then rolled and tied. This makes a very attractive piece of meat. A stuffing can be served at the side if desired. Browned potatoes are a good combination with this dish.

To prepare, rub the salt and pepper into the surface of the meat, sear it on all sides, then add enough stock or water to cover the bottom of the roaster or kettle, pour over it ground vegetables, cover and cook in a moderate oven or over a slow heat until done. Add more water or stock if necessary.

To every eight pounds of meat use:

4 small carrots
4 small onions
2 green peppers
1 stalk celery
1 sprig parsley

All vegetables should be chopped or ground **very** fine.

The time allowed for cooking depends on the thickness and size of the roll, but will be at least 30 minutes per pound in a moderate oven. When done, make a gravy of the liquid in the pan. Add more liquid, water or stock, if needed, and season to taste. Serve the meat in slices with a helping of the gravy. Allow the same amount of meat per serving as for any other braised or pot roasted dish.

Rolled flank, brisket, shoulder or neck can also be prepared in this manner.

Perhaps an advantageous and inexpensive method for preparing and studying one of the fancy meats is desired. Here again the school lunchroom or careteria may profit and the food class supply cost sheet be somewhat lessened.

Let us illustrate by the use of hearts. The firm-tissued meat resembles that of chicken. Suppose then for the lesson on fancy meats we suggest a heart chop suey recipe.

Hearts from beef, veal, pork and lamb are all suited to this dish or to a number of other dishes. Beef hearts are the largest and the muscle less tender than the others and must, therefore, be cooked longest. Since the tissue composing the heart is very compact a lower temperature with longer cooking will develop more flavor and make the meat more tender.

To prepare hearts, wash well in cold water, removing any blood clots. Trim out veins and arteries and any superfluous fat. Recipes sometimes call for soaking in soda water or treating in other manner, but if good fresh meat is used, there is no necessity for so doing.

To make the chop suey a mixture of beef and pork hearts may be used. The following makes a delectable dish.

25 pounds of fresh heart.
15 pounds of sliced white onion
11 pounds of celery, diced
1 pound fat drippings
3 cups of flour
4 quarts of brown stock
4 quarts of light stock
3 pints Chinese chop suey sauce
1 pint worcestershire sauce
½ cup dark molasses

To make: Cut the meat into narrow strips ¼ inch wide and brown in one cup of fat drippings. Stir occasionally so that it will brown uniformly. Put the meat in the stock pot or kettle, almost cover with brown stock and allow to cook slowly until tender. The quantity given will take about two hours.

In the meantime, brown the sliced onion in the same pan used for the meat, using one cup fat drippings. The onion should be a light shade of brown to preserve the delicate flavor desired.

Cover the cubed celery with light stock and cook separately in the stock pot. When the celery is tender thicken

with the flour which has first been made into a paste in cold water.

When the meat is tender combine with it the brown onions, the celery with thickened liquid, the chop suey sauce, worcestershire sauce and molasses. Usually the sauces used give sufficient seasonings, but the mixture should be tasted to assure sufficient salt.

Thoroughly heat the mixture and it is ready to serve. Makes 100 servings.

These two recipes illustrate two methods of meat cookery—namely braising and stewing. Let us briefly review these methods and the others and name the cuts of meat adaptable to each type.

First we have the meat cuts commonly called roasts. These cuts are generally from the more tender parts of the carcass. Roasting is one of the most popular methods of cooking meat but not the least expensive. Of lamb, the legs, the ribs, the loin, the shoulder, and the breast may all be roasts. The same cuts of veal may be used. Beef roasts are the ribs, the sirloin tip, the tenderloin, the rump, the round, and the chuck ribs or short ribs. Roasts of fresh pork are the loins, fresh hams and fresh shoulder cuts. The cured hams and shoulder cuts are cooked by roasting also.

Searing of meat is not absolutely necessary. If the roasts are seared it may be done at the beginning or the end of the cooking period. The searing may be done in the oven at a high temperature or on top of the stove in a preheated pan. The roasting is then completed at a lower temperature (350°F.) in the oven. The roast may or may not be dredged with flour, however, a better colored gravy results from a floured roast. The meat is salted when the roast is placed in the oven. No water is added to the pan and all roasts are cooked uncovered except veal.

The roast-meat thermometer is the most accurate method of telling when a roast is done to the desired degree. The thermometer is inserted so the bulb reaches the center of the fleshiest part of muscle. Care must be taken that it does not rest on bone or fat. Meat is then roasted until the thermometer registers a certain temperature. This temperature is different for different meats. For beef, 140°F., for a rare roast; 160° F., for a medium-done roast; 180°F., for a well-done roast. For fresh pork, 185°F., cured pork, 158°F., to 170°F. For lamb, 175°F., if liked slightly underdone; 182°F., for well done. For veal, 160° F. Lacking a thermometer, it is necessary to depend on the time-weight relation. That is, a certain number of minutes per pound is allowed. The weight of the roast must be known. For beef, allow sixteen minutes per pound for a rare roast, twenty-two minutes per pound for a medium-done roast, and thirty minutes per pound for a well-done roast. For lamb, allow about thirty-five minutes per pound. For pork, twenty-five to thirty minutes, and for veal, twenty minutes to the pound.

Broiling and panbroiling are also popular methods of cooking meats. The porterhouse, sirloin and club steaks of beef, the lamb or mutton chops or steaks, and ham and bacon are usually cooked by these two methods. For broiling the broiler oven is preheated to 350° F. for steaks. Place broiler pan so there is about 3 inches between top of steak and flame. Place chops about 2 inches below flame. Only one turning is necessary as the meat will be about half done when it is nicely browned on one side. Broil with the oven door open. A meat thermometer may be used to determine when the steak is done. The thermometer is inserted horizontally into the steak so that the center of the bulb reaches the center of the largest muscle. In using the thermometer, the steak is turned when the thermometer registers 104°F., and is removed from oven when thermometer registers 136°F. The steak will be medium done. Lacking the thermometer, time of cooking is used to tell when meat is done. A 2-inch steak cooked medium will take thirty-five to forty minutes. Lamb chops cut 1½ to 2 inches thick require twenty-five to thirty minutes; cut ¾ inch thick, they will cook in ten to fifteen minutes. Ham requires ten minutes for a very thin slice, twenty minutes for one ½ to ¾ inch thick, thirty minutes for one 1 inch thick.

The recognized method for panbroiling is the following:

Heat a heavy iron or aluminum frying-pan until it is sizzling hot. Do not add any fat. If the pan is hot enough, the meat will not stick. Pour off as much fat as possible as it collects in the pan, otherwise the meat will fry instead of broil. Do not add any water. Do not cover the pan. Brown the meat nicely on both sides in the hot pan, then reduce the temperature and cook until the desired degree of doneness is reached. Turn the meat from time to time to insure even cooking. After searing thick chops or steak, the cooking may be completed in the oven. It will require about the same length of time to panbroil chops as it does to broil them. Either broiled or panbroiled steaks and chops should be served at once on a very hot platter, otherwise the flavor and goodness are impaired.

Salt, pepper and butter are usually added after the meat is on the platter. The seasoning may be added, also, when the meat is turned.

Braising, pot roasting, and casserole cookery all come under the same general principle of cookery. This method is generally called braising. To braise is to brown the meat in a little hot fat, then cook slowly in a small amount of liquid in a covered utensil. It is difficult to give exact time required for cooking. Pork chops should be cooked by this method and require 20 to 25 minutes.

Lamb cuts adaptable to this method are heart, kidney, liver, all shoulder cuts, neck slices, chuck, breast and flank. Of beef—the rump, bottom round, chuck, flank, plate, brisket, kidney, tongue, liver, heart, and ground neck meat. Of veal—the heart, kidney, shoulder, neck, shank, breast and flank. Of pork—the fresh ham, shank, liver and fresh shoulder cuts.

Stewing means to cook small pieces of meat at a simmering temperature with or without the addition of vegetables. Brown stews are made by searing the meat in a small amount of fat before adding the liquid. If vegetables are to be used, they should only be added just long enough to become tender. From two and one-half to three hours is required to cook a stew.

The cuts of lamb used for this type of cookery are the chuck, shoulder, breast, flank, heart, neck slices, and shank. Of beef—the flank, shank, plate, bottom round, brisket, neck, kidney, and heart. The veal cuts—the heart, kidney, neck, breast, shank, brains, and shoulder. The pork cuts are the heart, kidney, shank, liver, hock and head.

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Corn and Its Uses

By
H. E. Barnard
Corn Industries Research Foundation

IT isn't easy today to exploit new ideas about food. The public is better informed than it used to be. It knows where to look for sound knowledge about food values and food uses. It recognizes the importance of the intelligent use of food for human beings just as for many years the farmer has realized the value of balanced rations for his animals.

Of course food habits are changing. When our pioneer grandmothers saw the ground covered with white frost in the fall, they knew that until summer came again the food supply of the family was fixed by the root crops, coarse vegetables and apples carefully stored away in the cellar; the beans and wheat and corn in the attic bins; the fresh meats which the fall butchering would supply. For most of us the situation is utterly different today. Cellars and attics for storing food supplies are no part of the modern home. The pantry shelves are lightly stocked for the grocery store is just around the corner. Fresh fruits and vegetables come to our doors in perfect condition from fields and orchards two and three thousand miles away.

There is no doubt as to the superior quality of the modern food supply over that of our forefathers. But not all of these improvements are due to improved methods of transportation. Many have been developed by finding ways to adapt the old things for our use. One of the most significant changes in the character of the food supply has to do with Indian corn. It saved the Pilgrim fathers who landed on bleak New England shores three hundred years ago. The great venture of the Mayflower voyagers seemed destined to fail when the discovery of a store of corn grown and gathered and laid away by the Indians saved the little colony from extinction.

And as through the years the country to the west was opened up by intrepid New Englanders and ambitious Virginians, the first crop planted in the new lands was Indian corn. The earliest breads were made by mixing the coarse meal with water and salt and baking it in thin cakes very quickly on flat stones, on the blade of a hoe, or wrapped in cabbage leaves in the ashes. Made of the whole meal, these cakes, brown and crisp in texture, were very delicious indeed. These were the tortillas and tamales of Mexico, Central and South America, the corn pone, hoe cake, corn dodgers, journey cake—Johnny cake—and ash cake of southern North America.

It was corn, too, which fed the farm animals and produced pork and beef and milk and butter—the first products bartered for manufactured goods at frontier towns and crossroad market places.

Of course corn meal is still an important cereal food although the amount of corn eaten as corn muffins and Johnny cake is but a small part of that enjoyed in other days. The mush or hasty pudding, which figured so largely in the diet of the Indians and colonists, is still served the world over. In Ireland they call it stirabout; in Italy, polenta; while the Pennsylvania Germans mix it with pork scraps, bits of hog's liver, and kidney and call it scrapple.

But while these good foods made from corn are less and less appreciated as our cities grow at the expense of the country, and as the changing type of work requires less energy and so less food, great changes have come about in the manufacturing process by which grain is converted into finer and better products for our tables. The improvements which have taken place in the milling of wheat are better appreciated by the older section of our population than by the youth. Fine white bread is the customary thing today. Not so many years ago the local grist mill ground the wheat and made the flour which is now milled, purified, and refined by complicated machinery operated by experts and controlled by chemists.

The improvements which have been made in the milling of corn are even greater than those employed in preparing other cereals for the table, for corn is not only ground and refined—it is transformed in wonderful ways into wholly new products which, to the uninformed user, bear no relationship to Indian corn. The story of this conversion of corn into sugars and oils and fine food starches is one of the most fascinating of all the thrilling stories of our food supplies.

The whole process is a series of operations and re-combinations. The first step in the manufacture of corn syrups, corn sugars, and corn oil is the breaking down of the grain into its several parts—the embryo, which is rich in oil; the hull, which is not used as a human food; the endosperm, or the starchy portion of the corn kernel. To separate these different parts the grains are soaked in warm water to which a small portion of sulphur dioxide has been added to prevent fermentation during the soaking process. The softened kernels are then passed through crushing mills which tear the grain apart and separate the hulls, embryos, and endosperms which, by appropriate processes, are removed and sent on to their own department of the great mills.

From the embyro the corn oil is extracted by great pressure and later purified and refined until it is ready for use in the home as a cooking or salad oil. In the development of the vegetable oil industry corn oil has become first among the seed oils and next to the fat from milk the most important oil used in the preparation of our food supply.

The endosperm, which is chiefly starch, is finely ground, screened, and then sifted through silk bolting cloth. The starchy liquid flows slowly through long, shallow troughs in which the starch granules gradually settle to the bottom. The starch is then removed in thick slabs, crushed and broken, and again washed and purified and finally dried in currents of warm air. The method used in drying and heating the starch determines the type of dry starch obtained. It may be one or more of the kinds that are used in the laundry—powdered laundry starch, thin boiling starch, pearl starch, crystal starch; it may be the corn starch that goes back to the home kitchens to be incorporated into blanc manges, corn starch puddings, or to thicken sauces and gravies, custards, ice creams, lemon meringue, and other pies.

It may go into industry and find its way into baking powder, gum drops or other candies or serve as a molding material for use in casting cream centers, marshmallows, or bonbons; as a filler in the manufacture of paper or the box the paper comes in; for cosmetics and hair tonics; for tanning leather; and for blacking and shoe polish; or in the manufacture of high explosives; for making alcohols used in varnish; in the manufacture of flashlights and radio batteries.

But we are most interested in starch as a food and in the new forms in which it furnishes much of the energy with which the world's work is done. A whole series of products is made from corn starch.

The first step in changing its form is the heating of the pure corn starch after it has been mixed in water in contact with a minute amount of hydrochloric acid in a big steam-jacketed kettle. The acid used is the same acid that is found in the gastric juice in the stomach. Indeed the process is the same chemical reaction whether it has to do with the changing of a few spoonfuls of corn starch pudding into sugar in the stomach or the inversion of hundreds of pounds

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Notes of Interest

The Manhattan Industrial High School for Girls, New York City, reports that it is carrying out a new cooperative placement plan. After pupils have taken the regular trade instruction for a full year they are formed into teams of two who share one job, each working a week while the other attends school. This means that the school course will take three years instead of two, at the completion of which most of the pupils will be 17 years old and much more easily placed than at a younger age.—*U. S. Children's Bureau, Washington, D. C.*

The National Children's Bureau of Italy has ordered its provincial branches to organize popular courses on maternal and infant hygiene for girls of 16 to 18 years, according to Maternity ed Infanzia of Rome. The courses are to be given preferably in day nurseries and similar child-welfare institutions, so that the girls may have practical training as well as theoretical instruction. No diplomas will be awarded in these courses. The granting of diplomas in this subject is restricted to graduates of special courses given for those who intend to take up maternal and infant welfare as a profession.—*U. S. Children's Bureau, Washington, D. C.*

At the Kansas State Agricultural College a group of former 4-H club girls, now in college, have rented a house and are living together cooperatively as a club. This organization has promoted the prestige of club work at the institution and at the same time has furnished a splendid means for girls with a small amount of money to reduce their college expenses.

Silent and talking moving pictures are now being made in connection with the Century of Progress International Exposition to be held in Chicago in 1933 that will show the astonishing progress in industry during the past hundred years brought about by man's ingenuity and development of scientific method.

The first film series will show in a one reel picture the advancement in the food industry. Life in old Fort Dearborn in the beginning of the 19th century will also be shown, and the film includes incidents of fort life such as the preparation of basic foods, trading with the friendly Indians, etc. The films will be loaned free to schools. For further information address the Atlas Educational Film Co. of Oak Park, Illinois.

New low prices for United States Department of Agriculture film strips will prevail during the fiscal year 1932-33, according to an announcement recently issued by the Office of Cooperative Extension Work of the United States Department of Agriculture.

The prices for film strips until June 30, 1933, will range from 14 to 85 cents each, depending upon the number of illustrations in the series. The majority of the 135 series that the department has available will sell for 28 and 35 cents each. Film strips are available on such subjects as farm crops, dairying, farm animals, farm forestry, plant and animal diseases and pests, farm economics, farm engineering, home economics, and adult and junior extension work. Lecture notes are provided with each film strip purchased.

A list of available film strips and instructions on how to purchase them may be obtained by writing to the Office of Cooperative Extension Work, United States department of Agriculture, Washington, D. C.

Extension Service, U. S. Dept. of Agr., June, 1932

As a part of the studies being made on standardization several colleges in Missouri are studying hosiery. These studies are particularly concerned with the adequacy of the present sources of information and the amount of money spent for hosiery. The Missouri Home Economics Bulletin reports that student clubs at Christian College, William Woods, Northeast State Teachers College at Kirksville, and the University of Missouri are cooperating. Buying records of hose are being kept by club members and questionnaires are used to secure other information.

A home economics course has been organized at the Newark State School for mentally defective girls. Twelve girls meet every day from 9:00 A.M. to 4:00 P.M. for three months. During this time they are taught cooking, personal hygiene, care of the sick, child care, a little about laundry work, and anything else, including how to answer a telephone, that will help them when they are paroled. The use of the kitchen and dining room in one of the employee's homes for two weeks during each class period, at which time each girl has one day there alone and prepares three meals for the family, gives an opportunity for the problem of housekeeping. When the girls have satisfactorily completed their three months' work they are graduated and receive a diploma.

Accidents in the home are responsible for the largest number of accidental deaths next to the number caused by automobiles, reports the National Safety Council of America. One-fourth of the 100,000 accidents in 1929 were caused by burns, falls, cuts and poisons in the home.

Among the causes are listed: loose rugs, toys on the stairs; dark stairways; pins, needles, and other sharp objects on the floor; medicine left in reach of children; open fireplaces; garage doors closed on running motors, and ice on the sidewalk.

Are You Doing Your Share?

A busy year lies ahead—a year that promises to show interesting developments in many fields, including that of Home Economics. No one who attended the meeting of the American Home Economics Association in Atlanta in June can doubt that many teachers of Home Economics are awake to their potential value as a real force in the economic structure of communities, or that many of them are availing themselves of the opportunities that exist to make their departments stand for something more than "a frill in the curricula." On the other hand there are many who are still asleep. Unless more teachers learn how to make the most of their opportunities for service, and work to make their courses function as they should in the life of the school and the community, home economics departments will be counted among those that can be done away with in hundreds of school systems when a necessity arises for a cut in personnel. "Home Economics is on trial," said Dr. Lydia Roberts at the Atlanta meeting, "and it is up to the teacher to make herself a vital part of the social program." And again, "Revolutionary change is upon us and the content, emphasis and ideas of home economics must be changed . . . there is little place today for the conventional home economics class—there is too great a responsibility on the teacher to help meet community needs." Are you doing your share in vitalizing your program? Are you helping to the best of your ability in the relief and welfare work of your community? Are you using this depression "as the main highway into the life of the child through which the child, the family and the teacher can get together on an intimate footing"? If not, who is to blame?

Developing a Philosophy for Home Economics Education

(Continued from page 310)

home. . . . Home Economics courses have been overloaded with the technique of cooking and sewing, too much overlapping of work between the junior high school and the senior high school, too little progression into the larger themes in home economics and the real problems of homemaking.

We should prepare girls for wifehood, motherhood, household management and family leadership. . . . I agree heartily that the man should share in the work and in the obligations of the home; but whereas for him it is and must remain secondary, for her it is and must remain primary. . . . These seem to me to be unalterable facts; and I for one have no itch to change them. . . .

"One thing needful is omitted—a philosophy of life in the home. Becoming expert in activities and acquiring a set of attitudes will never develop judgment or make anyone an artist in living. What we want is something far more subtly interfused in the details of home-making or any other occupation than the skills or even than the attitudes that make for 'efficiency' on the job. . . . Homemaking involves leadership. It is more important for a girl to know how to win and hold the eager and affectionate cooperation of every member of the home group than it is for her to make the best pies or sew the finest seam. . . . But she should be able to hold the whole complex of home duties and the stuff with which she is to work, from salt to sorrow, from passion to pennies in one illuminating and inspiring conception. . . .

"Systematic instruction is a laborious and bungling approach toward wisdom and grace of spirit but it is the only approach we teachers can provide. I know no way to learn but the roundabout painful way of thinking and acting accordingly. It is not the swift road of instinct, poetic insight or divination. But being articulate, rational, conscious, seems to be the human way of winning improvement. Can we not use that way toward improving our ability to make the home a place of generous, mutual affectionate effort for the growth and happy organization of human lives."[4]

"Many in the field of Home Economics feel that they have been bored long enough with statistics, research, questionnaires, case studies and objective data. They feel that many research workers have collected more data than they have intelligence to interpret wisely. They feel very firmly that 'figures do lie.' Research may give valuable information and at the same time it may be interpreted to prove situations that never exist. At its best it is never complete and may be misleading. It requires careful analytical interpretation in the light of first hand knowledge and keen common sense. We will need some of our best arm-chair philosophers to help us eliminate worthless and extravagant research and then to help us interpret our scientific facts."[5]

Surely we as teachers need a philosophy of education that is comprehensive, clear, sound and directive of what education should attempt to contribute to the betterment of life at the same time this should be a philosophy that is adaptive, enervating and conducive to the giving of immediate satisfactions.

May I offer the following suggestions in the hope that they will be a starting point for formulating your own philosophy of home economics education?

1. Teach in such a way that our young people have a fundamental and changing philosophy of life. In other words find meanings in their past experience that are stepping stones leading into the deeper areas of the present and future.

2. Teach the mechanics of housekeeping and family life so that they may become practically unconscious actions in order that energy and power will be free in the area of conscious planning to tend those things more intangible, but not less important, which seem to be the realities in life.

3. Teach to develop personality, one with the charm and fineness that designates culture. It seems to me that the things that constitute culture are really patterns that come to our rescue in time of need, or when we are technically "upset." Surely the ideal of this goal is to free energy for the big satisfactions or satisfying experiences of life.

4. Widen the horizon of your pupils; liberate and give them command of their own powers, so that they can find their own happiness in their own fashion, in their own situation and environment.

5. Teach with the idea that right habits of thinking and acting in this generation means that children of the next generation may have a greater chance of being physically and mentally fit.

We who are the leaders or teachers are first of all individuals, a part of the social environment of our students and because of our association with them in this capacity we need to be not only carefully prepared in the techniques of teaching and thoroughly versed in the content of primary and correlative subject matter but also people of vision, perspective, unity, vigor, initiative, discernment, and personality. We need to not only have had but to be having interesting and fine experiences which leave a wholesome attitude toward youth and society in our present day.

I think Samuel Butler in his "Way of All Flesh" sums up our present situation in life and I believe we can apply it in the field of home economics or better still in our home making activities.

"All our lives long, every day and every hour, we are engaged in the process of accommodating our changed and unchanged selves to changed and unchanged surroundings; living, in fact, is nothing else than this process of accommodation; when we fail in it a little we are stupid, when we fail flagrantly we are mad, when we suspend it temporarily we sleep, when we give it up altogether we die. In quiet uneventful lives the changes internal and external are so small that there is little or no strain in the process of fusion and accommodation; in other lives there is great strain, but there is also great fusing and accommodating power; in others great strain with little accommodating power. A life will be successful or not, according as the power of accommodation is equal to or unequal to the strain of fusing and adjusting internal and external changes."

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We shall never succeed in educating all the children of all the people till we first succeed in establishing in the minds of our people the basic truth that labor is not a curse, but a blessing, and that it is not the purpose of an education to free a child from the necessity of labor when he is grown, but that its end and aim is to fit him so that he can do to perfection the work in this world that he undertakes or is set to perform.—William Hawley Smith, Journal Nat'l. Ed. Ass'n.

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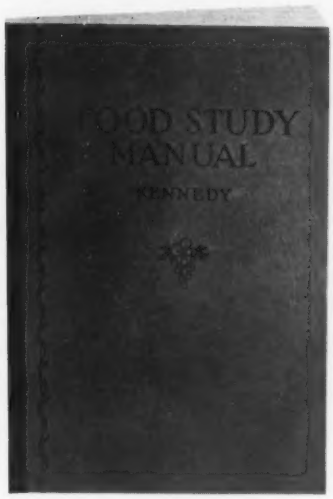

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Less in Quantities

Food Study Manual

By Ada Kennedy

What Others Say

- I find it especially helpful in elementary foods in the seventh and eighth grades. The manual is very concise and written so that it is easily understood by a seventh grader. The review questions at the end of each unit are especially helpful.
- The simple wording and directness of thought make it a most desirable book for junior-high-school pupils. Where time is limited, and it is impossible to go deeply into the subject, it is gratifying to turn to a book that stresses essentials in such a concise and comprehensive way.
- We get much better results with our home work since we have used the manual. The home practice is very important. Without home practice, foods work in the junior high school is rather superficial.
- It is simple in construction yet up to date in content.
- I like it very much for junior high students—first, because it is right to the point and there can be no chance of not understanding: second, because it covers every subject for those ages.
- I am impressed with the simplicity of arrangement of projects.
- It is complete and within the understanding of the average child and covers the amount of material that can be satisfactorily given in the time generally allotted to foods work.

Published by
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Text and laboratory manual combined.
Notable for its simplicity.
Written especially for junior high school use.

Beginning with the classification and uses of food, the student is carried through the planning and serving of simple breakfasts, luncheons and dinners, in which the general principles of cookery are sufficiently covered. Food for the sick and for special occasions included also. Rules for table manners help young girl to feel at ease no matter where she dines. Review questions at end of each chapter constitute an important part of the instruction material. Subject matter has been planned to fit time allotment in a school of junior-high level.

The author of *Food Study Manual* brought a rich background of training and experience to the writing of this textbook. She is a graduate of the Kansas State Teachers College; received her B.S. degree from Kansas State Agricultural College; supplemented by study at the University of Kansas; University of California at Berkeley and also at Los Angeles; Teachers College, Columbia University; Oregon State College, Corvallis; University of Southern California, Los Angeles; and Wolfe School of Costume Design, Los Angeles. In 1913 she was elected supervisor of home economics in Pasadena, California, later appointed director. Her success with the text in mimeographed form led her to put it into printed form so as to make it available to others.

Ada Kennedy

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Dry Cleaning Synthetic Fabrics

(Continued from page 316)

by the use of an Enzyme. Then iodine is added in order to form silver iodide. The silver iodide and excess of iodine are then removed by applying to the stain a solution of sodium thio-sulphate containing a little ammonia.

Finishing Operations

After the spotting operations, the garments pass to the finishing department, where they are ironed or pressed, according to the type of fabric being handled. The facilities for finishing in the modern dry cleaning plant are many. Ordinary electric irons, of course, are available. Steam irons which give off a fine spray of steam from the bottom of the iron are also used. For production finishing on women's garments, hot head presses are available. These presses consist of a polished metallic head which clamps down on a padded buck. The garment to be finished is pressed over this buck and is steamed in order to remove many of the wrinkles. The head is then clamped down and a large portion of the garment is ironed in one operation. Steaming boards for velvets and other napped materials are also available in most plants. After these operations the garments are inspected and are ready for delivery.

Cleaning of Synthetic Fabrics

The introduction of rayon produced but few changes in the practice of dry cleaning. Inasmuch as the rayons are pure cellulose, it was found that the same reagents which were used on silk and wool for stain removal purposes, could also be used on rayon with no deleterious effect on the fabric. The dyeing of rayon fabrics also produced no changes in the industry, inasmuch as they dyed with the regular cotton colors.

When Celanese * was introduced to the market, it was felt for a time that serious difficulties would be encountered in the dry cleaning operations because of the fact that some solvents used in the spotting department were also solvents for the cellulose acetate contained in the yarn. Research work conducted on Celanese fabrics has disclosed the fact that fabrics composed of these yarns are more easily cleaned than any other type. Many of the common inks which stain other types of fabrics are composed of dyestuff which have no affinity for the cellulose acetate type of fiber, consequently, ink stains are very easily removed on these fabrics. Some other very difficult stains such as argyrol or mercurochrome have no tendency to stain this type of fabric in the severe manner that they stain other types.

The dyeing of fabrics containing cellulose acetate yarns made necessary the introduction of an entirely new line of dyestuffs in the dyeing and cleaning industry inasmuch as the dyestuffs used for silk and rayon garments do not dye Celanese fabrics. In order to give the dry cleaning trade the benefit of special research on the cleaning of fabrics containing Celanese yarns, the Celanese Corporation of America maintains a research associate at the National Association of Dyeing & Cleaning. As a result of this associateship, the removal of stains on Celanese fabrics has been simplified to such an extent that only six or seven reagents are necessary for the removal of all types of stains on these fabrics.

Through the research work carried out at the Association, dry cleaners are now familiar with the fact that the newest synthetic yarn, which originally gave evidence of being difficult to clean, is in reality the most easily cleaned of all types.

Dry Cleaning Prices

In common with many other industries which market a service, a wide range of prices prevails in the dry cleaning trade. The public is often desirous of knowing why such a difference in price can exist in an industry which ostensibly offers a uniform service. The answer is that a uniform service is not offered in the dry-cleaning trade. There are many operations in dry cleaning practice which require the expenditure of labor and capital if quality work is to be maintained. In plants offering quality cleaning, the solvent used is maintained to a high degree of purity by costly clarification methods involving chemical treatments, pressure filtration, and frequent distillation. Where quality cleaning prevails women's garments are always deodorized while hanging in a dry-room, whereas cheaper methods employ the tumbler described above, which produces wear and tear on the garments and tends to produce shrinkage. Where quality cleaning prevails expert attention is given in the spotting department to the removal of stains in such a manner that no injury occurs to the fabric, whereas in cheaper plants harsh methods are used in stain removal with subsequent injury to the material. In the finishing department of a quality plant all garments are finished in such a manner that no stretching, shrinking or shining of the garment is produced; garments requiring hand ironing are finished entirely by hand and all care is taken to finish the garment in such a manner that it will look like new. Where quality standards do not prevail the main objective is to remove wrinkles and to return the garment in a passable condition. In order to secure good cleaning it is necessary for a customer to patronize a reputable cleaner who maintains a price commensurate with the cost of producing a garment cleaned under ideal conditions.

* See March, 1932, Practical Home Economics for story of manufacture of chemical yarns.

Corn and Its Uses

(Continued from page 324)

of corn starch in the converter.

When the conversion of the corn by the acid has reached just the right point, the crude corn syrup, which is a mixture of the sugars known as glucose and dextrose, is drawn off and the traces of hydrochloric acid present are neutralized with soda which changes the acid into common table salt. The crude syrup is filtered and purified and then concentrated by boiling out the water it contains until a thick, heavy, pure syrup is formed. Over a billion pounds of this syrup is produced every year from corn, nearly one-half of which is used by confectioners in the manufacture of candy. Corn syrup is a necessary ingredient of all classes of candy, from the all-day sucker to the high-priced creams, from the gum drop to the finest caramels. It prevents hard candies from becoming coarse and brittle. It permits the production of soft creamy bonbons and cream centers and fudges.

A large quantity of corn syrup is mixed with other syrups to increase the sweet taste—for corn syrup is less sweet than cane syrup—and to develop a pleasing flavor. Because it is so pure a product, corn syrup has a very mild taste and so it is frequently combined with sorghum or maple syrup or one of the many forms of cane syrup.

Still another product made from corn starch by inverting the starch to sugar with acid is corn sugar—different, it is true, from cane or beet sugar but chemically a true sugar. In its state of highest purity corn sugar is a form of food which is more readily utilized by the body than any other food we take into our stomachs except water.

Each year we manufacture nearly a billion pounds of corn sugar. Corn sugar consumption is large and growing steadily. Enormous amounts are used by bakers in making best quality bread. It is used in the manufacture of ice cream as its delicacy and purity bring out the flavor of the cream; in manufacturing condensed milk; and in fruit canning.

Perhaps one of the most important uses for corn sugar is in infant feeding. Because it is unnecessary to convert dextrose or corn sugar in the infant's stomach, as is the case with cane or beet sugar, in order to prepare it for prompt utilization by the body, corn sugars and corn syrups are now used to supply the energy requirements of most prepared infant foods and pediatricians recognize it as an essential in proper infant feeding.

We have come a long way from the cornfield to the infant's nursing bottle and the steps by which the journey has been made are among the most important contributions the chemist and industry have made in the effort to fit corn to the needs of the modern world.

FOR 53 YEARS
ALWAYS DEPENDABLE

and now...two new important features

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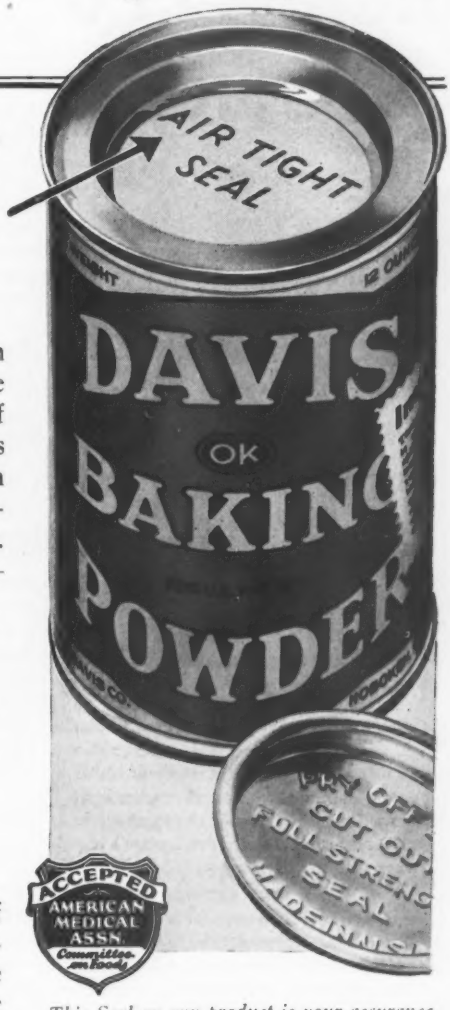

No air or moisture can penetrate to destroy the leavening strength of Davis Baking Powder. Its freshness is *sealed in!* In Davis you get *all* the leavening strength you pay for. It's *always* sure-raising—*always* dependable.

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Decoration in the Lunch Room

(Continued from page 321)

walls and ceiling. They form the background. Because the room is rather dark, it needs a light tint—light buff, for instance, with a pinkish cast to give it warmth. We'll be careful to select a shade of buff that is quite light, remembering that four walls reflect a color four times and consequently make it deeper. We'll choose a flat paint for the walls because it has such a velvety appearance, and a flat paint for the ceiling, also, but of a plain white or a lighter tint than the wall color, so that it will reflect all the light possible.

How about a dado? An ornamental border around the base of the wall of the room will detract from its height and will have a decorative value as well as a practical one. Suppose we decide it is to be a soft, gray green and that it will be five feet deep. At the top edge we can apply a moulding, paint a narrow stripe of deeper green or use a stencil. If we leave the upper edge plain, we can have a string of circus animals, drawn and cut out by the art classes of the lower grades, parading around the room. The practical value of such a dado is that finger marks do not show quite so clearly on the darker surface as on the light. We'll use a gloss or semi-gloss paint for this part of the wall decoration as they are even more readily cleansed with a damp cloth than a flat paint.

Now for the woodwork. How about a gleaming gray-green enamel, just a little darker than the shade used for the dado? Such a shining sheath of color would conceal the ugliness of the dark, dull woodwork in short order.

Can't you see drapes at the window of a soft coral color? We'll have to use ingenuity to make them materialize. Even the most modest fabric for such tall windows would run into money. Perhaps Mr. Sherwin at the lumber yard would donate some wallboard or thin sheets of wood from which the boys of the manual training class could cut out draperies of conventional-design. They're most attractive and can be cut in three perfectly straight pieces—one for each side and one for the valance—or to simulate draperies that have been tied back at each side. The drapes can be painted all one color or edged with a contrasting shade. If we can't figure a way to promote wood or wallboard, we might use flour sacks joined and dyed the desired shade.

Glimpses of coral will be intriguing on the shelves back of the dishes and in the drawers where the kitchen gadgets are kept. It will be no trick at all for us to perform this magic with the stroke of a brush. Such notes of gaiety make working with the kitchen utensils a game. Even the ice chest should come in for its share of beauty—a coat of cream enamel, edged in green, with a stenciled glint of coral in the center of its panels. A note of black somewhere to accent the color scheme—perhaps on the hinges of the cupboard doors, on the locks themselves, or on the broom handle or dustpan. There's no reason why they shouldn't be part of the decoration, you know.

For the tables and chairs—the combination of the three colors: soft green, light buff and coral. Some tables can be buff, with green chairs trimmed in the color of the table; other tables can be green, with chairs of buff and coral. There are several attractive color combinations. We'll use lacquer or quick-drying enamel for the tables and chairs because they are so durable and easy to keep clean. Perhaps the boys of the manual training class will be able to do the painting of this furniture.

There is no reason, either, why the doors cannot be interesting factors in the scheme of decoration. There's no law about painting doors all one color and we might paint the inner panels of the doors of our lunch room in buff, with a narrow line of coral around the light color to separate it from the green of the outer edge.

For wall decorations—let's utilize the talent of the art classes. A contest again, perhaps, for the posters best illustrating the foods that are most healthful. These would be very suitable as well as attractive. Perhaps, too, it would be possible for the art classes to make paper flowers to decorate the tables and to paint flower pots or boxes for the plants on the window sills.

Why shouldn't the lunch room be the show place for the art work of the school? With such an arrangement, it will be possible to change the decorations frequently and keep the interest in the lunch room constantly alive. Everyone in the building will take pride in it and you'll find that much community interest has been roused as a result of your enthusiasm and activity.

The creation of an attractive lunch room gives you an excellent opportunity to teach the children of your school how to enjoy this business of living—how to appreciate things that are lovely but not costly. Certainly you can give them no greater treasure than such knowledge.

During the development of the room, you and the teachers of the art classes have a marvelous opportunity to show the students working under you the amazing power of color to inspire or depress—the way to use a brush to transform prosaic objects into beautiful ones—the way paint can aid us to keep house in the most practical and least arduous fashion. Color is a magic force and paint is a magic substance that protects as it beautifies.

Editor's Note: Miss Kent will be glad to help any reader with her Decoration problems. Write her in our care.

Children's Clothing

(Continued from page 313)

ways be kept subservient to a child's welfare.

If the speed, skill, effectiveness, neatness in dressing essential to character building is to be acquired, the problem of fastenings may be the nucleus around which the design should be built A review of some of the findings in nursery school studies should not be amiss.

Zippers are the easiest and take the least time to manipulate.

Large buttons better than small.

Buttons three-quarters of an inch in diameter are best for preschool age.

Bows cannot be tied completely until the fifth year and should not appear on children's clothing if child is being trained to dress himself.

Snaps are not practical unless of the large variety that are inserted by machinery and should not be used on children under four years.

Hooks and eyes are quite impossible.

Front openings are the most convenient.

Right and left sides can be buttoned equally well, but not so easily as front.

A button at side of waist line is not easily managed.

Lowest button on side is much easier

Back closings are the most difficult.

Fastenings should not be concealed under pleats.

Smallest number of buttons or fasteners makes for speed in dressing.

Other factors to be considered in design of cloths:

(a) Provision for growth, in deep hems, tucks, etc.

(b) Convenient position of pocket.
Upper left side of blouse.
Just above belt line.
If below belt line, the bottom should not be near crotch.

(c) Sun suits.
Low necked. No sleeves.
Shortest possible trousers.
Free from belts.

(d) Winter suits.
Wide laps to keep out snow.
Close fitting plackets.
Snug openings. Knitted bands are popular at neck, cuff, and leg.

(e) Cut of sleeve.
All authorities advocate raglan sleeve whenever one is necessary

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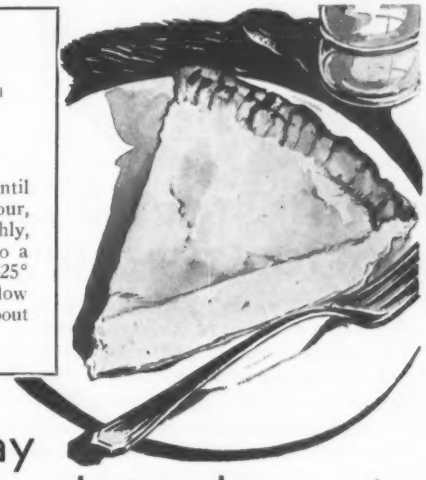
CARNATION CHESS PIE

½ cup butter
1 cup sugar
¼ cup flour
3 egg yolks
½ cup Carnation Milk
1 tsp. vanilla
⅛ tsp. salt

Cream butter. Add sugar. Cream until sugar granules are dissolved. Add flour, salt and egg yolks. Stir thoroughly, then add milk and vanilla. Pour into a raw pie shell. Bake in a hot oven (425° F.) 10 minutes. Then reduce to a slow oven (300 F°.) to finish baking, about 20 minutes. Yield: 1 pie.



We've found a way to make this famed Southern pie *without* cream

If you're a Southerner, you know chess pie. It's magnificently rich, and beautiful to look at, and everyone loves it. But the best Southern cooks insist that it must be made with cream—and nobody wants to squander cream these days, even on the most distinguished pie.

We found a way to make it without a drop of cream. You simply use Carnation Milk, instead. Carnation Milk is doubly rich in cream. And, because in Carnation Milk the cream globules are broken up into minute particles, it gives a smoothness of texture that even cream can't give. You'll find Carnation Milk an economy and a convenience in all your cookery. And you'll definitely prefer the creamy, delicate texture of Carnation-made candies and cream sauces, custard and ice creams and cream soups.

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Position _____ School _____

The Power Laundry

(Continued from page 315)

work, depending upon the machine, to use many more suds and rinses than can be used under home conditions. It is not at all unusual, for example, to find laundries using from three to five separate suds and four to six rinses with fresh water. The number of suds used generally depends upon how badly soiled the loads may be.

Drying and Finishing the Fabrics

After the fabrics are washed and thoroughly rinsed, they are removed from the washer and relieved of water in a so-called extractor. This is nothing more than a special type of centrifuge which takes only a very few minutes.

If the fabrics are to be finished in the plant, they are extracted until they are almost dry, but not quite—just right for ironing. The flat pieces are then carefully passed through a steam-heated flatwork ironer. Shirts are ironed on special form-fitted pressing machines, places where there are gathers being touched up with hand irons. Other articles are either finished by hand or on machines, depending upon the type of service.

Laundering Wool Pieces

Probably one of the most difficult classifications which one is required to launder either under home or power-laundry conditions consists of fabrics made entirely or in part of wool. The greatest difficulty which is faced is the matter of felting and its accompanying shrinkage, which can occur regardless of whether a wool fabric is woven or knit, unless the utmost precautions are taken.

Wool is a fiber which is peculiarly sensitive to the action of soap, alkali, heat, moisture, and pressure. Any one, or a combination of these agencies is likely to produce felting in woolen fabrics. For this reason, special types of wool washers have been designed to clean soiled wool pieces with the least possible amount of mechanical action. Blankets especially can be washed without running the danger of decreasing their length and width if handled in a washer of the right type, and if a neutral soap and moderate temperatures are used.

Laundry Services

As is well known, many types of laundry service are available to the public. Although locally their names may vary somewhat, the following is a more or less national list of laundry services, followed by a brief description of each:

1. *Damp Wash or Wet Wash* (everything is washed, the surplus water extracted and the wash returned damp.

2. *Thrif-T Wash or Damp Wash—Flat Work Ironed.* (All wearing apparel is washed, surplus water extracted, and returned damp. The flat work is washed and ironed on a flat work ironer.)

3. *Float Ironed,* sometimes called *Homestic.* (Both wearing apparel and flat work are ironed by being passed through a flat work ironer and wearing apparel retouched by hand ironers.)

4. *Flat Ironed Work.* (Everything is passed through the flat work ironer).

5. *Fluff Dry,* no starch. (All pieces are washed, extracted and dried in revolving cylinder heater with warm air.)

6. *Rough Dry.* (Flat pieces ironed ready for use, wearing apparel starched where necessary and all pieces of wearing apparel dried in a revolving cylinder heater with warm air.)

7. *Soft Finish.* (The same as No. 6, except that no pieces are starched).

8. *Finished Family Work.* This is offered under many different names, often a coined word. (The most complete service of all. Each piece is finished on steam heated presses or by hand-ironers.)

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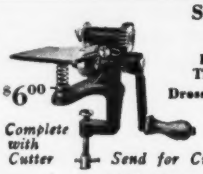

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Nutrition in Its Relation to the School Program
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The film as a whole is appropriate for groups studying sewing, chemistry, physics, manual training, and engineering. It is purely educational and contains no advertising.

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Modern Romance of Foods

(Continued from page 318)

calories, some protein, fat and carbohydrate, but these factors are usually abundantly supplied in other food articles such as meat, cereals and root vegetables, and we needn't be particularly concerned with the effect of canning on these caloric supplies.

"In passing however, it is worth noting that very little loss of these factors occurs in substituting a canned fruit or vegetable for a fresh type, especially if we conserve the liquid as well as the solid content of our can."

And then there was a year earlier the highly interesting experiment of Grace McLeod and Lela Booker of the nutrition laboratory, Teachers College, Columbia, for the single vitamin C, and on specific foods. In these studies it was found that between canned and fresh grapefruit that a very little more of the canned, specifically two-tenths to eight-tenths grams, were necessary to protect from scurvy, and that canned pimiento has an anti-scorbutic value of 227 units per pound, identical with that of fresh grapefruit.

There are many stories of importance in the romance of single foods but it is interesting to know briefly of the scientific care, hard work and time involved in canning of tomatoes, corn, peas and milk.

The story of Gail Borden and his struggle to put what today is the largest single pack of the industry, milk, into cans, is one of a combination of the qualities of imagination, initiative, perseverance, and great energy. Living in these days of plethoric milk supplies, fresh, condensed, evaporated, dried, malted, it is hard to imagine that in 1851 a cow had to be taken on transatlantic crossings so that the passengers, particularly babies, could have milk. It was a day of great inventions, and Gail Borden's achievement of sweetened condensed milk in cans was an important one.

Suppose we could only have corn for the few months when we bite it greedily from the cob? Isaac Winslow began experimenting with canning the succulent kernel in 1839, but it wasn't until 1862 that the United States government granted him a patent on his invention. He spent fourteen years in experiments, and then waited nine years for his patent. Corn, needing great heat, was very hard stuff to can. It wasn't possible, said Uncle Sam to himself, that Winslow was able to can it. So he took plenty of time to find out while Winslow waited.

Shortage of labor in America has been primarily responsible for the impetus of machines to take over much of the work of the bargaining laborer, as happened in the canning of peas. Peas had to be picked and "podded" by hand, often an expensive and sometimes quite impossible task, since there were not always laborers enough to do it. The podder was invented first, and then one of the inventors of the podder, E. P. Scott, invented a machine which eliminated the arduous hand picking of peas. This allowed whole vines to be brought to what today is known as the "viner," which takes these vines and through an opposing rotary motion beats opens the pods.

And the housewife's handyman tomato, what would she do without it if she could not buy it, in and out of season? The tomato, after baffling mankind so long with the suggestion of its being poison, baffled canners long after most other fruits and vegetables went through the cannery without being touched by human hands. For a long time no way was found to peel the tomato, except by hand. And then it had to submit its tender, rosy skin to the Garguantuan clutch of the machine, although it is still true that most tomatoes are hand peeled.

Romance? There is business romance aplenty in the building and perfecting of the tin can, one of the most marvelous little cooking and preserving pots science has ever devised, and in the preparing of the foods, so that, they too, shall be as sanitary and as delicious as nature intended them to be.

A Summer Project

(Continued from page 317)

White walls with cream ceilings, and a gray floor served as the background. Against this on one end the homemade table, benches, renovated buffet with mirror hanging above balanced with a homemade seat and bookshelf and a chair on the other end. This furniture, painted a pale yellow and accented with green checked oilcloth table covering and green checked gingham curtains completed a most simple and yet charming outdoor room. Wild flowers from the woods placed in a vase on the buffet added just the right finish to the outdoor room.

Among the many rewards for her work is the promise of the overseer to repaper the entire house with Dorothy's selection of paper, and to paint the entire house within the next few months. Already screens have been placed at the windows and doors and as one visitor said, "It looks like an oasis in the desert."

On noting the willingness with which paint, paper, and other materials were forthcoming for this one bottom home a delegation of other tenants met the overseer with the demand that their homes be improved too. His answer was that when they showed as much effort and made as excellent use of materials already on hand as Dorothy had they too could look for help from him. With Dorothy showing how and setting the pace the probable far reaching influence of her summer home project work can scarcely be realized.

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And, from a nutritional standpoint, commercially canned foods are equal to similar home cooked foods, and indeed frequently superior in vitamin content to raw foods which may have been picked before maturity, stored for a considerable period, or shipped long distance to market.

Certain canned foods, notably unsweetened evaporated milk, sweetened condensed milk, and tomato juice, are recommended by medical authorities in the feeding of infants —the homogenized milk for its greater digestibility than cow's milk, and tomato juice for its exceptionally high vitamin C content. Later, pureed vegetables have their place—carrots, spinach, peas, etc. The leading brands are approved by the American Medical Association. Incidentally, they have the high approval of mothers, too, for they save the endless labor necessary in preparing pureed vegetables at home.

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